DOCUMENT RESUME

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IDENTIFIERS	Exercise Technologists; Ohio; Ophthalmic Technicians

ABSTRACT

This "tech prep" state competency profile contains all the competencies required and recommended for entry-level employees in occupations in the health technologies cluster. Introductory materials include the following: descriptions of the different types of competencies (essential ones that must be included in all new tech prep programs and recommended ones), definitions that broadly describe occupations within the health technologies cluster, explanation of leveling codes used in the profile, summary (listing) of the competencies divided into 71 units, and a matrix that indicates whether a unit is required or recommended for each of 11 occupations. The occupations are as follows: radiographer, respiratory care therapist, physical therapist assistant, registered nurse--associate degree, medical laboratory technician, emergency medical technician, dental hygienist, health information technician, exercise technologist, ophthalmic technician, and medical assistant. The competencies categorized under units follow. Each competency is presented in a one-page format that indicates the unit, whether the competency is essential or recommended, the grade level (by the end of grade 12 or by the end of the associate degree) and the depth (introduce, reinforce or add depth, and proficient), academic code (communications, mathematics, or science related), the competency, and list of competency builders (more specific competencies). (YLB)

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ED 430 152

TECH PREP

Health Technologies

State Competency Profile

Columbus, Ohio

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TECH PREP

Health Technologies
State Competency Profile

This document is the result of collaboration between a number of individuals and organizations. The Ohio Department of Education and the Ohio Board of Regents provided financial and staff support for the development of the base document.

The current document is a result of a review by a state panel of business/industry/labor representatives and secondary/associate degree educators on March 26, 1998. (The name and institutional affiliation of each panel member is provided on the following pages.) Jan Eley, Akron Area Tech Prep Consortium; Linda Fauber, Lakeland Tech Prep Consortium; Julie Daugherty, Eastern Ohio Valley Tech Prep Consortium; and Jennie Royer, Stark County Tech Prep Consortium served as facilitators of the March 26, 1998.

On August 5, 1998, a panel of business/industry and secondary/associate degree educators was convened to finalize the Nursing (AD) portion of this document. The Medical Assistant portion was finalized during a December 15 meeting. (A list of Nursing and Medical Assistant Panel members is attached).

The following document is not intended to replace or in any way modify the existing requirements established by professional associations or accrediting bodies. It is rather intended to outline in competency form the essential and recommended skills needed by entry level employees in Health related occupations.

As you review the document, keep in mind the following:

Essential Competencies

Those competencies marked *Essential* in the State Competency Profile were determined by the statewide business/industry/labor panel to be necessary to ensure minimal levels of employability. Entry level employees should be able to perform this competency without supervision; therefore, students must be proficient in these competencies at least by the end of the Associate Degree.

Essential competencies must be included in all new Tech Prep programs. Tech Prep consortia with current programs in this area will be expected to phase-in essential competencies into their programs as well.

Wording of essential competencies may not be altered. The leveling may only be changed to deliver the competency earlier during the educational process. For example, the leveling of an essential competency in the State Competency Profile may be altered locally from a P or Proficiency leveling at the end of the Associate Degree to a P or Proficiency by the end of the 12th grade. The reverse is not permissible. For example, a competency leveled P or Proficient by the end of the 12th grade in the State Competency Profile cannot be changed to a P or Proficient by the end of the Associate Degree at the local level. For additional information on leveling of competencies, refer to the Leveling Code Sheet.

Competency builders are intended to help define each competency; therefore, the builders may be modified as long as that modification does not change or dilute the intent of the State Panel.

Issues which arise regarding delivery of the *essential* competencies once the program is implemented will be addressed by a State review panel of business/industry/labor and education representatives with possible revisions to the State Competency Profile at a later date. Any issues identified during the local verification meeting should be conveyed to Tech Prep Curriculum Services by the consortium coordinator.

Recommended Competencies

Competencies marked *Recommended* are suggested additions to the State Competency Profile. Each of these competencies should be reviewed during a local competency profile meeting, with a joint panel of business/industry/labor and education representatives deciding whether to include each competency in the local curriculum. The decision should be based upon a consideration of local business needs, as well as priorities and time constraints of the educational process. Wording and leveling of all recommended competencies and builders may be modified.

Additional Units/Competencies/Builders

Competencies and/or builders may be added to any unit in the State Competency Profile. Additional units may also be added.

Occupation Definitions

Skills may be added to the occupational definitions based on the modifications made during the competency review. Because the definition is based on the skills detailed in the competency profile, only minor modifications should be necessary.

For additional information about this State Tech Prep Competency Profile contact:

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Occupational Definitions
Health Technologies Cluster

The following definitions broadly describe occupations within the Health Technologies Cluster. Occupational definitions are not job descriptions. They are broader in focus and provide general skill training directions.

Radiographer — An individual who performs diagnostic examinations and administers therapeutic procedures using x-rays and related radiations, under the supervision of radiologist. Technical skills should include, but **not** be limited to:

- conducting x-ray procedures
- equipment operation and maintenance
- evaluating radiographic images
- applying anatomy, physiology, positioning, and radiographic techniques
- determining exposure factors to achieve optimum radiographic results
- providing education related to radiologic procedures and safety
- monitoring quality assurance

Respiratory Care Therapist — An individual who performs therapeutic and life-support procedures using respiratory equipment under the supervision of a physician. Technical skills should include, but **not** be limited to:

- administering medications/oxygen via mist, mask, tent, or other procedures as prescribed by physician
- observe patient's reaction to treatment and record as needed
- managing ventilators and other intensive care therapies
- emergency procedures and airway assessment management
- equipment operation and maintenance
- storage and sterilization methods
- patient education
- medical ethics
- basic pharmacology
- infection control methods
- assessing condition of patient
- documentation skills

Physical Therapist Assistant — An individual who, under the supervision of a physical therapist, assists with patient examinations, treatment administration, and monitoring. Technical skills should include, but **not** be limited to:

- therapeutic exercises and massage
- heat, light, sound, water, and electrical modality treatments
- helping patient learn and improve functional activities in daily life
- fitting, adjusting, and training patient in the use and care of assistive devices
- observing patient during treatments and reporting progress to physical therapist
- demonstrating therapeutic exercises, modalities, and rehabilitation
- medical ethics

Registered Nurse — An individual who promotes health, assesses patient conditions, establishes plan of care based on diagnosis, directs or implements safe, effective, comforting, collaborative nursing care, and evaluates outcomes. Technical skills should include, but **not** be limited to:

- assess condition of the patient and support systems
- confer with physician on plan of care
- implement physician orders including prescribed treatments and medications
- evaluate outcomes of treatments and nursing interventions
- report and document observations and findings
- apply management, supervision, and delegation principles in planning and evaluating care
- teach and counsel patients and individuals in support system, including caregivers
- apply legal and ethical principles

Medical Laboratory Technician — An individual who performs standard clinical laboratory procedures and examinations under the direction and supervision of a pathologist, qualified physician or laboratory director. Technical skills should include, but **not** be limited to:

- laboratory instrument operation, calibration, and maintenance
- principles and methods of clinical chemistry, hematology, immunology, immunohematology, and microbiology
- medical laboratory safety procedures
- performing medical laboratory tests, procedures, examinations, and analysis
- microscopic and chemical analysis of body fluids
- analyzing test results and reporting results to medical practitioners
- infection control methods

Emergency Medical Technician — An individual who performs initial assessment and management, and provides continuous care to medical and trauma patients. Technical skills should include, but **not** be limited to:

- disease, disorder, and injury symptomology
- emergency medical procedures
- equipment operation and maintenance
- radio communications
- emergency pharmacology
- emergency vehicle operation
- mass casualty incident management

Dental Hygienist — An individual who practices the cleaning of teeth and related oral health therapies, either independently or in collaboration with dentists. Technical skills should include, but **not** be limited to:

- patient examination
- preventative oral health care
- oral health education
- dental hygiene therapy
- initial periodontal therapy
- dental radiography
- prosthetic cast creation

Health Information Technician — An individual who classifies medical information and prepares patient records that are complete, accurate, and coded according to standard medical/health care classification systems. Technical skills should include, but **not** be limited to:

- analysis of medical records
- accurate collection and preparation of statistical data
- coding of diseases, procedures, operations, and therapies
- quality assurance management
- transcription of medical reports
- responsible release of information to insurance companies, law firms, and government agencies
- maintenance and utilization of a variety of storage and retrieval systems
- processing, storage, and retrieval of computerized health information

Exercise Technologist —

To Be Determined

Ophthalmic Technician — An individual who performs the diagnostic testing and measurements used by the ophthalmologist in evaluating and treating eye diseases. Technical skills should include, but **not** be limited to:

- taking medical and ocular history
- conducting basic and advanced ocular measurements
- testing for ocular functions
- performing diagnostic tests
- administering topical ophthalmic medications
- apply patches and protective devices
- assisting in ophthalmic surgery
- instructing patients on contact lens care, preventive eye care, use of eye drops, and pre-operative and post-operative care

Medical Assistant — An individual who performs both administrative and clinical procedures in the ambulatory care setting under the supervision of a physician. Technical skills should include, but **not** be limited to:

- assess condition of the patient and support systems
- implement physician orders including treatment and medications
- report and document observations and findings
- apply legal and ethical principles
- teach and counsel patients and individuals in support system including caregivers
- coding of diseases, procedures, operations and therapies
- transcription of medical report
- collect and prepare patient record

Health Technologies
Tech Prep Competency Profile Matrix

RAD = Radiographer
RCT = Respiratory Care Therapist
PTA = Physical Therapist Assistant
RNA = Registered Nurse—Associate Degree
MLT = Medical Laboratory Technician

EMT = Emergency Medical Technician
DHY = Dental Hygienist
HIT = Health Information Technician
ET = Exercise Technologist
OPH = Ophthalmic Technician
MA = Medical Assistant

Page #	UNIT	RAD	RCT	PTA	RNA	MLT	EMT	DHY	HIT	ET	OPH	MA
1	Employability Skills	X	X	X	X	X	X	X	X	X	X	X
11	Professionalism	X	X	X	X	X	X	X	X	X	X	X
21	Teamwork	X	X	X	X	X	X	X	X	X	X	X
25	Professional Practices	X	X	X	X	X	X	X	X	X	X	X
29	Workplace Safety	X	X	X	X	X	X	X	X	X	X	X
31	Project Management	X	X	X	X	X	X	X	X	X	X	X
36	Problem Analysis	X	X	X	X	X	X	X	X	X	X	X
39	General Administrative Functions	X	X	X	X	X	X	X	X	X	X	X
43	Economic and Business Principles	X	X	X	X	X	X	X	X	X	X	X
53	Basic Computer Concepts and Applications	X	X	X	X	X	X	X	X	X	X	X
74	Documentation	X	X	X	X	X	X	X	X	X	X	X
76	Infection Control and Risk Management	X	X	X	X	X	X	X	X	X	X	X
85	Medical Terminology	X	X	X	X	X	X	X	X	X	X	X
87	Anatomy, Physiology, and Pathology	X	X	X	X	X	X	X	X	X	X	X
102	Medical Law and Ethics	X	X	X	X	X	X	X	X	X	X	X
107	Psychology of Stress	X	X	X	X	X	X	X	X	X	X	X
111	Psychology of Human Relations	X	X	X	X	X	X	X	X	X	X	X
116	First Aid and Medical Emergencies	X	X	X	X	X	X	X	X	X	X	X

X = Unit required for the occupation.
R = Unit recommended for the occupation (local review necessary).
* = Competencies should be addressed in a manner applicable to the occupation.

RAD = Radiographer
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RNA = Registered Nurse—Associate Degree
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ET = Exercise Technologist
OPH = Ophthalmic Technician
MA = Medical Assistant

Page #	UNIT	RAD	RCT	PTA	RNA	MLT	EMT	DHY	HIT	ET	OPH	MA
120	General Administrative Duties *	X	X	X		X	X	X	X	X	X	X
132	General Administrative Duties for Medical Assistant *											X
144	Vital Signs *	X	X	X	X	X	X	X	X	X	X	X
150	Nutrition		X	X	X			X	X	X		X
154	Basic Pharmacology *	X	X	X	X		X	X		X	X	X
159	Patient Education *	X	X	X	X		X	X	X	X	X	X
163	Examinations *	X	X	X		X	X		X	X	X	X
173	Examinations for RNA				X							
176	Clinical Assessment		R		X							X
179	Radiography	X										
197	Respiratory Care		X									
229	Physical Therapy			X								
245	The Nursing Process	R			X						R	
252	Nursing Communication Skills		R		X							
261	Nursing Clinical Procedures				X							
267	Medication Use	X	X								X	
271	Clinical Chemistry					X						
290	Immunohematology					X						
304	Immunology and Serology					X						
312	Bacteriology					X						

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Page #	UNIT	RAD	RCT	PTA	RNA	MLT	EMT	DHY	HIT	ET	OPH	MA
327	Parasitology					X						
332	Urinalysis					X						
340	Hematology					X						
351	Phlebotomy	R	X			X	X					X
359	Emergency Medical Technology I		X				X					
370	Emergency Medical Technology II		R				X					
380	Emergency Medical Services	R	R	R			X					
410	Oral Anatomy and Pathology I			X				X				
414	Oral Anatomy and Pathology II							X				
421	Chairside Procedures							X				
438	Extraoral and Interoral Exams							X				
442	Preventive Oral Hygiene Procedures							X				
451	Dental Morphology							X				
455	Dental Radiography	X						X				
472	Preventive Dental Assisting Procedures							X				
475	Dental Specialties							X				
483	Dental Materials I							X				
486	Dental Materials II							X				
490	Dental Hygiene							X				
495	Health Information Processing								X			
500	Health Information Maintenance								X			

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OPH = Ophthalmic Technician
MA = Medical Assistant

Page #	UNIT	RAD	RCT	PTA	RNA	MLT	EMT	DHY	HIT	ET	OPH	MA
506	Health Information Clerical Functions								X			
513	Health Information Quality Control								X			
524	Health Information Report Preparation								X			
526	Health Information Supervision								X			X
530	Medical Assisting X-ray Operator											X
546	Medical Assisting Respiratory Care											X
560	Medical Assisting Physical Therapy											X

X = Unit required for the occupation.
R = Unit recommended for the occupation (local review necessary).
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Unit: Employability Skills

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Develop a career plan**

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to monetary)
Identify job requirements
Investigate education/training opportunities (including speaking with someone in the trade)
Evaluate personal strengths and weaknesses
Refine a written educational plan which leads to a specific career field
Create career passport

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Prepare for employment**

Competency Builders:
Identify employment sources
Identify advantages and disadvantages of self-employment
Identify present and future employment opportunities (by geographic location)
Research job opportunities
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laAC
Demonstrate ability to accurately complete a job application
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Use proper diction in interviews
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions using simulated role playing exercises
Describe procedures for following up after an interview
Evaluate job offers

Give notice to employer of job change
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects)

BIL: Essential

EDU:	12	AD	AC
	P		C

Competency: **Evaluate the importance of self-esteem as an employability skill**

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Demonstrate job retention skills**

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Demonstrate knowledge of work ethic**

Competency Builders:
Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Exhibit appropriate work ethic**

Competency Builders:
Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Apply decision-making techniques**

Competency Builders:
Identify decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision
Identify ownership of decision to be made

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Apply problem-solving techniques**

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Exhibit characteristics for job advancement**

Competency Builders:
Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Respond appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Project professional image**

Competency Builders:
Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individual's vital role in organization
Exhibit proper etiquette in professionally-related situations

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Formulate individual and professional goals**

Competency Builders:
Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

BIL: Recommended

EDU:	12	AD	AC
	I	P	M

Competency: **Organize personal finances**

Competency Builders:
Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discretionary vs. non-discretionary expenditures

BIL: Recommended

EDU:	12	AD	AC
	I	R	

Competency: **Support community well-being**

Competency Builders:
Identify environmental, educational, and social issues
Participate in social and/or community/industry activities
Participate in industry activities and organization

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Achieve organizational goals**

Competency Builders:
Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organizational goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate positive relations in the workplace**

Competency Builders:
Identify personality types
Identify methods of working with various personalities
Identify various management styles
Support organization expectations
Support organization decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Manage stressful situations**

Competency Builders:
Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Identify positive methods to channel stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

BIL: Recommended

EDU:	12	AD	AC
	P	R	C

Competency: **Analyze effects of family on work and work on family**

Competency Builders:
Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Apply lifelong learning skills**

Competency Builders:
Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Manage professional development**

Competency Builders:
Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate knowledge of teamwork**

Competency Builders:
Define self-direction
Define responsibility
Define accountability
Differentiate work groups and teams (i.e., internal, external)
Identify conditions essential to teamwork (e.g., problem solving)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of team members
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system
Define mutual respect
Define equality
Define "group think"
Provide feedback
Receive feedback
Define communication styles
Define management styles
Define social style

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate teamwork**

Competency Builders:
Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members (e.g., talents, skills, abilities)
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Recognize failure as part of learning

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Use teamwork to solve problems**

Competency Builders:
Identify appropriate situations for using teams
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation (e.g., business plan & procedure)
Identify problem
Use problem-solving process in a team setting (e.g., Brainstorm, Paredo, Fishbone)
Identify resources
Gather data
Analyze data
Describe solution options
Implement solution options
Review solution
Review case studies

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Conduct team meetings**

Competency Builders:
Plan agenda
Set ground rules
Schedule meeting and location
Set time limitations
Invite appropriate personnel
Set next team meeting
Solicit outside speakers as needed
Select scribe
Select meeting leader
Facilitate ground rules
Select facilitator
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, budget, time frame and accountability to tasks
Monitor time
Overcome team impasse
Close meeting on time
Publish minutes in timely manner
Avoid placing individual agendas above the group's agenda

Unit: Professional Practices

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Explain professional responsibilities**

Competency Builders:

Explain the need for professional and ethical standards
Explain responsibility of the individual to apply ethical standards
Identify responsibility to client(s) and employer(s)
Explain consequences of unprofessional and/or unethical behavior
Explain importance of conflict resolution in the workplace

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Identify legal and ethical behavior**

Competency Builders:

Differentiate between legal and ethical behavior

Explain terms, principles, and characteristics of legal and ethical behavior (e.g., loyalty, discretion, solicitation, competitor, supplier)

Explain legal ramifications of breaching rules and regulations

Explain effects of unethical and/or unlawful behavior

Practice within scope of the profession

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Function as a self-managed employee**

Competency Builders:
Propose project (C)
Organize tasks
Manage time
Meet deadlines
Maintain business records (C)
Make long-term and short-term plans
Evaluate progress
Report progress (C)
Delegate project
Acquire appropriate licenses/registrations
Obtain permits and releases

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Follow intellectual property rights and copyright laws**

Competency Builders:
Explain purpose of patent
Explain purpose of copyright
Explain purpose of licenses
Explain purpose of trademarks
Explain rights of the originator
Explain rights of the public
Define confidentiality
Define proprietary
Explain legal ownership of proprietary material
Describe stock image/text usage rights
Explain negotiation of contracts
Explain reproduction licensing and residual usage

Unit: Workplace Safety

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Maintain safe working environment**

Competency Builders:

Describe what an MSDS sheet is
Comply with HMIS material safety data sheets (MSDS) and OSHA regulations
Comply with all MSDS regulations regarding hazardous materials
Maintain clean work area by removing waste, keeping alleyways clear, cleaning tools, and preventing spills
Minimize workplace causes of environmental burdening, pollutants, and poisoning
Describe pollution solution limits imposed by permits and regulations
Comply with regulatory guidelines in handling, labeling, and disposal of solutions (e.g., fountain chemicals, inks, wash-up solutions, drum grounding)
Identify visual equipment controls (e.g., monitors, read outs)
Identify auditory equipment controls
Comply with workplace safety rules and procedures
Comply with personal safety rules and procedures
Comply with applicable electrical, mechanical, hydraulic and pneumatic safety rules and procedures
Recycle appropriate materials
Use preventive maintenance checklists
Identify location of control panels, shut-off valves, and fire extinguishers

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Demonstrate knowledge of ergonomics**

Competency Builders:

Define ergonomics

Define risk factor

Define maximum permissible limit (MPL) and action limit (AL) for lifting

Define cumulative trauma disorder (CTD)

Identify susceptibility factors for CTD

Minimize extreme joint movement

Minimize use of excessive muscle/physical force

Minimize repetitive tasks

Minimize mechanical stresses (e.g., sharp edges, heat, cold, hard surfaces, weights, vibration)

Minimize awkward body positions

Explain use of rest pauses

Explain need for mats and footrest for standing jobs

Explain need for appropriate working heights of chairs, stools, workbenches, equipment

Explain need for adequate lighting

Explain use of anthropometric (i.e., centering one's view of everything around man) design

Unit: Project Management

BIL: Essential

EDU:	12	AD	AC
	P	R	C,M

Competency: **Explain project management**

Competency Builders:

Identify project purpose/goal
Identify project objectives
Identify work breakdown structure (WBS)
Identify resource requirements
Identify project economics/funding
Identify risks

BIL: Recommended

EDU:	12	AD	AC
	I	P	M

Competency: **Plan projects**

Competency Builders:
Apply responsibility assignment matrix (RAM)
Apply Gantt or bar charts
Apply network diagrams
Apply critical path method (CPM)
Apply project education and review techniques (PERT)
Apply software programs

BIL: Essential

EDU:	12	AD	AC
	P	R	C,M,S

Competency: **Implement projects**

Competency Builders:
Monitor project
Control project
Modify project

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Evaluate projects**

Competency Builders:
Analyze performance
Perform critical review of project
Draw project management conclusions

BIL: Recommended

EDU:	12	AD	AC
	I	P	C

Competency: **Write project summary**

Competency Builders:
List project goals
Document project's key successes
Document project's key failures
Analyze costs vs. accomplishments

Unit: Problem Analysis

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Appraise situations**

Competency Builders:

Identify concerns
Set priorities
Identify resolution process
Plan resolution

BIL: Recommended

EDU:	12	AD	AC
	I	P	S

Competency: **Analyze problems**

Competency Builders:
Identify potential problems
Identify likely causes
Test for probable causes
Verify cause
Identify preventive actions
Identify contingent actions

BIL: Recommended

EDU:	12	AD	AC
	I	P	S

Competency: **Analyze decisions**

Competency Builders:
Identify objective(s)
Identify alternatives
Evaluate alternatives
Assess risks
Make final choice
Determine effectiveness of decision
Document results

Unit: General Administrative Functions

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Maintain work flow**

Competency Builders:

Organize work
Prioritize work
Apply time-management techniques
Complete assigned tasks in a timely manner
Coordinate with team members

BIL: Recommended

EDU:	12	AD	AC
	P	R	C

Competency: **Perform telecommunications operations**

Competency Builders:

Display telephone etiquette
Operate equipment
Listen assertively
Verify information
Record messages
Place calls
Organize teleconferences
Use voice mail/messaging systems
Operate fax/modem machine
Use e-mail systems
Use Internet communications services
Use videoconference facilities

BIL: Recommended

EDU:	12	AD	AC
	P	R	

Competency: **Perform scheduling functions**

Competency Builders:

Create calendar/schedule

Maintain and use appointment calendars with accurate addresses and phone numbers

Process requests for appointments

Verify appointments

BIL: Recommended

EDU:	12	AD	AC
	I	P	

Competency: **Manage records**

Competency Builders:
Implement filing system
Implement retention system
Perform electronic filing operations
Maintain inventory records
Retrieve files

Unit: Economic and Business Principles

BIL: Essential

EDU:	12	AD	AC
	I	P	M

Competency: **Describe basic economic concepts**

Competency Builders:

Identify importance of economic resources
Explain concept of economic resources
Explain importance of economic resources
Explain concept of economic goods and services
Differentiate between economic goods and services
Differentiate between needs and wants
Explain concept of supply and demand
Explain concept of price
Explain how supply, demand, and price are related
Explain concept of private enterprise and business ownership
Explain concept of profit
Explain concept of risk
Explain concept of competition
Explain relationship among risk, competition, and profit
Describe global economic and world markets
Describe economic cycles (e.g., unemployment, recession, inflation, budget deficits)
Describe economic arena's effect on business (e.g., financial, competitor indicators, industry)

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe economic systems**

Competency Builders:
Describe free enterprise system
Describe relationship between government and business
Describe relationship between labor and management
Compare types of economic systems

BIL: Essential

EDU:	12	AD	AC
	I	P	M

Competency: **Understand income statement data**

Competency Builders:
Identify revenue
Identify overhead expenses
Identify fixed expenses
Identify direct labor
Identify indirect labor
Identify direct and indirect materials
Identify general and administrative expenses
Identify selling expenses
Identify net income

BIL: Recommended

EDU:	12	AD	AC
		P	M

Competency: **Explain equipment depreciation**

Competency Builders:
Explain straight line
Explain sum of year's digits
Explain declining balance
Explain IRS strategies

BIL: Essential

EDU:	12	AD	AC
	I	P	M

Competency: **Identify cost and profit influences**

Competency Builders:
Explain importance of loss prevention
Explain importance of maximizing quality
Explain importance of maximizing productivity
Differentiate between specialized training and cross training
Explain labor, management, and government influences on cost /profit
Explain cost/profit influences of retraining
Define impact of seasonal business cycles

BIL: Recommended

EDU:	12	AD	AC
	I	P	M

Competency: **Describe economic indicators and trends A**

Competency Builders:

Define gross national product and gross domestic product
Define national debt
Define impact of interest rates
Define impact of government spending
Define impact of seasonal business cycles
Define impact of inflation, growth, recession, and unemployment
Define impact of national and world events
Define impact of the growth of international trade

BIL: Recommended

EDU:	12	AD	AC
	I	P	M

Competency: **Explain international trade**

Competency Builders:
Describe nature and importance of international trade
Explain marketing in international trade
Explain balance of trade concepts
Describe impact of foreign investment
Describe the influence of national debt
Describe the effect of currency exchange rates on international trade

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain basic business concepts**

Competency Builders:
Identify functions of business
Explain role of management
Explain role of labor
Explain concept of service as a product
Explain role of administration
Explain role of operations
Identify role of company objectives
Identify importance of ethical business practices
Identify types of ownership
Identify components of a business plan
Calculate break even and payback
Explain role of depreciation in business decisions
Explain role of capital gains
Describe business reporting and information flow
Map interface of departmental functions
Describe business communication channels (e.g., formal, informal)
Explain basic total quality management (TQM/ISO) principles
Explain the effects of bankruptcy

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain legal concepts**

Competency Builders:

Define legal terminology
Explain business law concepts
Identify contracts and/or legal documents
Explain relationship of laws and regulations to company contracts, policies, and procedures
Identify laws relating to working conditions, wages and hours, civil rights, social security, disability, unemployment insurance, and exempt vs. nonexempt

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain role of marketing**

Competency Builders:
Identify aspects of sound business image
Explain purposes of marketing
Describe functions of marketing
Describe effects of marketing
Identify target markets
Define sales potential
Explain pricing strategies
Differentiate among advertising campaigns
Explain functions of advertising agencies
Describe sales incentive programs
Differentiate among types of marketing strategies (e.g. phone, mail, person)

Unit: Basic Computer Concepts and Applications

BIL: Essential

EDU:	12	AD	AC
	P	R	C,M

Competency: **Describe personal computer operations**

Competency Builders:
Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage devices
Identify types of memory
Describe back-up and archival disciplines

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Explain information processing cycle**

Competency Builders:

Describe computer languages and their use (e.g., machine, postscript, proprietary, graphic description)
Describe difference between data files and program files
Explain PC/Mac layout
Explain PC/Mac network layout
Explain mini/mainframe network layout
Differentiate among hardware, software, and firmware
Differentiate between open from proprietary architecture
Explain upload/download

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Explain operating systems**

Competency Builders:

Identify operating systems and their attributes (i.e., DOS, Unix, Macintosh, windows)
Describe compatibility issues
Identify cross-platform file conversion tools
Describe how commands handle tasks in operating systems
Describe various input/output systems
Describe the purpose of operating system utilities
Differentiate between a compiler and an interpreter

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Demonstrate basic computer literacy**

Competency Builders:
Create directories/folders and sub-directories
Format disks
Manipulate files (copy, rename, delete)
Keyboard proficiently by touch

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Operate computer hardware**

Competency Builders:

Practice proper media handling techniques (e.g., magnetic fields, dust, liquids)
Identify hardware and its use
Use hardware (e.g., printers, modems, touch screen, digitizers, plotters, graphic tablets, scanners, film recorders, video, laser image setters)
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures
Perform basic hardware troubleshooting
Explain hardware addressing techniques
Maintain usage and maintenance logs

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Explain operation of peripheral devices**

Competency Builders:

Identify peripherals and operating requirements of each

Identify primary devices used for personal computer auxiliary storage

Describe how data is stored on diskettes and hard drives

List speed and storage capacities of computer auxiliary storage devices

Describe attributes of diskettes and hard disks regarding speed and storage capacity

List types of disk storage used with large computer systems

Define role of tape storage in relation to personal and large computers

Describe security issues

Explain purpose of input devices (e.g., keyboard, mouse, scanners, pens, bar code readers, credit/debit/smart cards, voice, video, gloves)

Describe operation of output devices (e.g., voice, speaker output devices, printers, plotters, printer sharing units, SCSI interface, video display)

Describe operation of multimedia (e.g., video, audiosound)

Describe operation of storage devices (e.g., tape, disk, CD-ROM)

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Operate peripheral devices**

Competency Builders:

Use appropriate reference materials
Load media devices
Start media devices
Unload media devices
Import, edit, and export video and audio
Set up print devices
Operate scanner devices
Operate print devices
Maintain print devices
Monitor peripheral equipment operations
Perform routine maintenance on peripheral devices
List appropriate control procedures
Transmit via modem
Receive via modem
Search a CD-ROM library
Print information from a CD-ROM library
Describe device driver

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Store media**

Competency Builders:
Identify need for data library
Retrieve stored media (e.g., on-line, off-line, permanent, off-site)
File stored media (e.g., on-line, off-line, permanent, off-site)
Initialize media
Catalog media

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Explain software applications**

Competency Builders:
Define software types and functions
Describe need for application software
Describe different types of software applications
Explain advantages and disadvantages of integrated and dedicated software
List software sources
Explain software copyright laws
Explain data compression techniques
Explain use of passwords/security
Utilize desktop productivity tools

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Use word processing packages**

Competency Builders:
Define word processing terminology
Explain functions of word processing software
Explain word processing applications
Use appropriate reference materials
Keyboard efficiently by touch
Use mouse
Initialize diskette
Prepare backup file
Maintain backup file
Update spelling dictionary and spell check
Perform document functions (e.g., locate, rename, delete, save, retrieve, copy)
Perform formatting functions (e.g., center, underline, bold, cut and paste)
Use edit features
Use sort features
Add page numbers to document
Add headers and footers
Print files, pages, screens and blocks of text
Verify accuracy of output
Create a document
Save a document to disk
Retrieve a document from disk
Edit an existing document
Describe word-wrap
Print a document
Store boilerplate material (e.g. templates, stationary files)
Compose documents at keyboard
Tabulate multiple columns

Prepare new documents from existing ones
Merge selected copy with new information
Prepare various types of table options
Format text
Integrate database, spreadsheet and graphic files
Convert documents from one system to another
Demonstrate use of computer thesaurus
Use multimedia techniques/resources
Perform merge functions

BIL: Essential

EDU:	12	AD	AC
	I	P	M

Competency: **Use spreadsheet packages**

Competency Builders:

Define spreadsheet
Demonstrate knowledge of basic spreadsheet terminology
Define components of spreadsheets
Describe implementation of spreadsheet operations in business scope
Use spell check
Execute an electronic spreadsheet
Enter data, formulas, and functions
Differentiate between labels and numbers
Speculate using "what if..." questions
Sequence keystrokes in the creation of a macro
Create database within spreadsheet and perform data query functions
Move around in spreadsheet and correct errors
Format spreadsheet
Create graphs
Print graphs
Save previously saved files
Load previously saved files
Replicate cells using copy commands
Use electronic spreadsheet to complete business application
Use spreadsheet to plan financial strategies
Prepare spreadsheet
Use multimedia techniques/resources

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Use databases**

Competency Builders:
Define database
Explain terms used in database systems
Describe common functions of database systems
Use database to create, input, edit, and display fields and records
Analyze structure of database files
Perform calculations with a database file
Alter structure of database file
Sort records based on multiple fields
Identify advanced database technology
Use appropriate reference materials
Utilize relational database
Enter elements into database
Proofread database
Explain database
Design report formats
Transfer data to and from remote database
Print reports using data from multiple databases
Use database files with other application software
Verify accuracy of output (e.g., edit reports)

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Use graphic user interface (GUI) techniques**

Competency Builders:
Describe a variety of computer interfaces
Explain multi-tasking environment
Setup data exchange between two different applications
Setup an object link between two different applications
Explain the use of dynamic link libraries
Transfer data from instruments to other computers

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Manage software packages**

Competency Builders:
Install software packages
Upgrade software packages
Document installation and upgrade of software packages
Apply security levels/procedures to sensitive data
Understand software memory allocation
Manage software preferences
Manage software conflicts

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Maintain computer security requirements**

Competency Builders:
Apply business ethics
Follow security rules, regulations, and codes
Implement security procedures
Document security procedures
Perform security checks

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Maintain personal computer systems**

Competency Builders:
Monitor system status and performance
Run diagnostics
Report computer system malfunction(s)
Report software malfunction(s)
Fix recoverable files
Maintain security
Maintain computer log
Perform backup procedure(s)
Perform preventive maintenance
Follow log-off and power-down procedure(s)
Follow equipment maintenance procedures
Follow quality control procedures

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Demonstrate basic knowledge of networks**

Competency Builders:
Explain communications standards
Describe network structures
Explain network types and protocols
Explain network connectivity
Explain the function of servers in a graphic network
Describe various network operating systems
Explain the difference between network software and individual use software
Use a network to access, file, and store files

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Use a shared environment**

Competency Builders:
List purposes of a network environment
Define electronic mail
Identify advantages and disadvantages of electronic mail
Describe impact of local & wide area networks on mail delivery
Compose electronic messages
Send electronic messages using appropriate format
List categories of electronic mail service
Transmit document using electronic mail system
Monitor electronic mail
Use networked environments
Search database for properties of materials
Conduct literature searches using a variety of on-line tools
Explain access, security, transmission and retrieval

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Demonstrate knowledge of the Internet**

Competency Builders:

Define the Internet
Explain how the Internet works
Explain Internet capabilities and limitations
Explain how to connect to the Internet via modem, ISDN, etc.
Install Internet software
Navigate the World Wide Web
Identify services and tools offered on the Internet
Use services and tools offered on the Internet
Explain bookmarks

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Use the Internet for research**

Competency Builders:

Define how the Internet can be used for research
Use services and tools offered on the Internet for research
Identify search engines
Use search engines
Evaluate Internet resources and accuracy of information
Access library catalogs on the Internet
Access commercial and government resources
Download files

Unit: Documentation

BIL: Essential

EDU:	12	AD	AC
	I	P	M,S,C

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:
Record data
Maintain test logs, if applicable
Compile cumulative reference notebook/record

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:
Write out procedures
Design charts and graphs
Outline reports
Write reports
Present reports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal/standard precautions as outlined by the Centers for Disease Control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal/standard precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Identify safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Maintain infection control of work area**

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Apply aseptic and sterilizing principles**

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments

Maintain infection control

Prescrub instruments, if applicable

Disinfect instruments, if applicable

Sterilize instruments, if applicable

Operate sterilizing equipment, if applicable

Store sterilized equipment and supplies

Define asepsis

Identify methods for sterilizing and disinfecting reusable equipment

Define spore strip and how it is used to guarantee sterilization

Explain why dating of sterilized equipment is necessary

Explain why proper documentation of disinfection and sterilization procedures is necessary

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures, if applicable
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Demonstrate isolation techniques**

Competency Builders:
Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Maintain patient safety**
(Not applicable for MLT)

Competency Builders:
Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings
Verify patient identify
Identify self/title to patient
Identify behaviors that may escalate to violence
Identify steps in managing at-risk patient

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Explain sexually transmitted diseases (STDs)**

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Unit: Medical Terminology

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:
Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms
Write out full names of commonly used abbreviations (e.g., bx = biopsy)
Spell medical terms correctly

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

BIL: Essential

EDU:	12	AD	AC
	P	R	S

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

BIL: Essential

EDU:	12	AD	AC
	P	R	S

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:
List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the muscular system**

Competency Builders:
Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the nervous system**

Competency Builders:
Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principal cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

BIL: Essential

EDU:	12	AD	AC
	P	R	S

Competency: **Demonstrate knowledge of the circulatory/ cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the respiratory system**

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the digestive system**

Competency Builders:
Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the endocrine system**

Competency Builders:
Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:
Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch

Define refraction, accommodation, real image, and emmetropic

Describe common disorders and injuries of the senses

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of immunology**

Competency Builders:
Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Comply with medical law and ethics**

Competency Builders:

Differentiate between legal and ethical behavior

Explain terms, principles, and characteristics of legal and ethical behavior

Explain state and federal rules and regulations governing the practice of the profession

Explain legal ramifications of breaching rules and regulations

Explain effects of unethical and/or unlawful behavior of health care professionals

Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Explain process of certification/licensure of health professionals

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Exhibit ethical behavior**

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)

Explain health care professional's responsibility in situations of patient abuse and neglect

Explain health care professional's responsibility in situations of coworker chemical addiction

Identify personal, societal, and global implications of substance use and abuse

Explain effects of unethical behavior of health care professionals

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Describe legal ramifications of misconduct**

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior

Explain legal and ethical ramifications of breaching patient confidentiality

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Practice discretion regarding patient information**

Competency Builders:
Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-lending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

BIL: Essential (RNA Only)

EDU:	12	AD	AC
	I	P	C,M

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept

Differentiate between stress and stressors

Explain how an individual's perception of stress influences his response to stressors

Explain how internal and external mitigating factors influence one's response to stress

Identify coping mechanisms used to decrease stress

Identify biological adaptive responses to stress

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system

Explain how the internal and external non-specific mitigating factors relate to the physiological stress response

Differentiate between immune systems response to stressors in children and adults

Explain how the concept of stress relates to activation of the disease process

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:
Assess psychological responses to stress in a patient
Promote exploration of feelings when providing patient care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected patient interventions and suggest alternative measures

Unit: Psychology of Human Relations

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:
Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Establish rapport**

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

BIL: Essential

EDU:	12	AD	AC
	P	R	C,M,S

Competency: **Use emergency procedures**

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S,M

Competency: **Perform first aid**

Competency Builders:
Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S,M

Competency: **Maintain cardiopulmonary resuscitation (CPR) according to certification agency standards**

Competency Builders:
Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Respond to medical emergencies**

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

All competencies in this unit are to be addressed as applicable to a specific occupation.

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Perform scheduling and recordkeeping duties**

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule routine equipment maintenance and repair

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Perform other departmental duties**

Competency Builders:
Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Manage reception area**

Competency Builders:
Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate telephone handling techniques**

Competency Builders:
Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy
Phone non-medication prescriptions to appropriate agency

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain appointment schedules**

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain medical records and laboratory reports**

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

BIL: Recommended

EDU:	12	AD	AC
	I	P	C

Competency: **Prepare office communications**

Competency Builders:
Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

BIL: Essential

EDU:	12	AD	AC
	I	P	M,C

Competency: **Use office equipment**

Competency Builders:
Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

BIL: Recommended

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:
Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (TRICARE)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

BIL: Recommended

EDU:	12	AD	AC
	I	P	C

Competency: **Perform diagnostic coding**

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

BIL: Recommended

EDU:	12	AD	AC
	I	R	C,M

Competency: **Process insurance claims/forms**

Competency Builders:
Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

BIL: Recommended

EDU:	12	AD	AC
		I	C,M

Competency: **Perform financial functions**

Competency Builders:
Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: General Administrative Duties for Medical Assistant

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Perform scheduling and recordkeeping duties**

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule routine equipment maintenance and repair

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Perform other departmental duties**

Competency Builders:
Assist in dealing with vendors
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Manage reception area**

Competency Builders:
Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate telephone handling techniques**

Competency Builders:
Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy
Phone non-medication prescriptions to appropriate agency

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain appointment schedules**

Competency Builders:
Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain medical records and laboratory reports**

Competency Builders:
Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Prepare office communications**

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

BIL: Essential

EDU:	12	AD	AC
	I	P	M,C

Competency: **Use office equipment**

Competency Builders:
Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:
Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (TRICARE)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Perform diagnostic coding**

Competency Builders:
Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

BIL: Essential

EDU:	12	AD	AC
	I	R	C,M

Competency: **Process insurance claims/forms**

Competency Builders:
Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Perform financial functions**

Competency Builders:
Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Interview patient**

Competency Builders:
Complete patient information sheets
Record medical/health history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C,M

Competency: **Measure temperature**

Competency Builders:

Follow safety and aseptic precautions for taking temperature

Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature

Identify factors that may affect temperature

Select route for measuring temperature

Demonstrate use of different types of thermometers

Record temperature measurements

Report abnormal temperature measurements

Maintain thermometer(s)

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C,M

Competency: **Measure pulse**

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse rate that should be reported
Record pulse

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Measure ventilation**

Competency Builders:

Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C,M

Competency: **Measure blood pressure**

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer
Demonstrate use of mercurial sphygmomanometer
Demonstrate palpated blood pressure
Demonstrate use of electronic sphygmomanometer
Demonstrate location of stethoscope bell for proper blood pressure reading
Identify systolic and diastolic sounds

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Obtain physical measurements**

Competency Builders:
Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Identify fundamentals of nutrition**

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

BIL: Recommended

EDU:	12	AD	AC
	I	P	

Competency: **Identify nutritional needs related to special conditions and/or diseases**

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

BIL: Essential (RNA only)

EDU:	12	AD	AC
	P	R	

Competency: **Draw correlation between diet and exercise**

Competency Builders:
Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

BIL: Recommended

EDU:	12	AD	AC
		P	

Competency: **Identify facets of alternative nutrition (RNA, MA only)**

Competency Builders:

Identify indications and effects of tube feedings

Identify indications and effects of intravenous fluids

Identify indications and effects of lipids

Identify indications and effects of hyperal

Unit: Basic Pharmacology

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M,C

Competency: **Maintain supply of medications, as applicable to the profession**

Competency Builders:
Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (e.g., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (e.g., comply with government regulations)

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M,C

Competency: **Calculate dosage according to physician's orders**

Competency Builders:

Explain the need to verify the accuracy of medical orders
Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M,C

Competency: **Instruct patients on use of medications**

Competency Builders:
Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M,C

Competency: **Administer medications according to medical orders as applicable to the profession**

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Evaluate response to medication**

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Patient Education

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Inform patient/family about diagnostic procedures**

Competency Builders:
Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Educate patient/responsible party about self-care related to results of specific diagnostic procedure/ therapy**

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications with patient/responsible party (e.g., ortho, dietary, ostomy, splints, orthotics)
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

BIL: Essential (PTA, RAD, RNA, MA only)

EDU:	12	AD	AC
	I	P	C

Competency: **Provide psycho-social care for patient/family**

Competency Builders:
Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Inform patient about World Health Organization (WHO) immunization requirements**

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations

Instruct patient/family on international requirements

Reinforce instructions from other health professionals to patient/family member(s)

Unit: Examinations

All competencies in this unit are to be addressed as applicable to a specific occupation

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Demonstrate general knowledge of diagnostic studies**

Competency Builders:

Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (e.g., range of motion)

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with general examination**

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for patient privacy
Prepare patient for examination
Communicate with patient with special needs (e.g., hearing or vision disorder)
Inventory personal property
Assist physician/therapist with examination
Carry out physician's/therapist's orders and treatment plan
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with eye, ear, nose, and throat examination**

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with and chart eye irrigation
Assist with and chart ear irrigation
Assist with and chart tympanometry
Assist with and chart laryngoscopy
Describe taste bud reactions
Conduct visual screening
Conduct auditory screening
Administer eye, ear, and nose medications
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with obstetric and gynecological examination**

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Obtain cytology history
Assist with Pap smear
Instruct patient in self breast examination
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with pediatric examination**

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Record measurements on growth chart
Record immunizations
Apply restraints when needed (e.g., papoose board)
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with proctology and gastrology examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with proctoscopy
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with orthopedic examination**

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with neurological examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with geriatric examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Unit: Examinations for RNA

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Demonstrate general knowledge of diagnostic studies**

Competency Builders:
Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair/chair
Assist patient with ambulatory aids
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (e.g., range of motion)

BIL: Recommended

EDU:	12	AD	AC
	I	P	S,C

Competency: **Assist with medical examination**

Competency Builders:
Assess patient preparation for procedure
Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for medical asepsis and standard precautions
Prepare patient for examination physically and psychologically
Communicate with patient with special needs (e.g., hearing or vision disorder)
Assist physician/therapist with examination
Carry out physician's/therapist's orders and treatment plan
Evaluate patient response
Follow up patient needs
Ensure procedure documentation and labeling
Initiate home care instruction

Unit: Clinical Assessment

BIL: Essential (MA) Recommended (RCT, RNA)

EDU:	12	AD	AC
	I	P	

Competency: **Perform tuberculosis testing**

Competency Builders:
Administer tine test
Administer Mantoux test
Interpret test results

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Perform body fluid specimen collection and handling according to CDC requirements**

Competency Builders:

Collect specimens

Label all collected specimens properly

Describe conditions that must be met if specimens and tests are to be used as legal evidence

BIL: Essential (MA) Recommended (RCT, RNA)

EDU:	12	AD	AC
	I	P	

Competency: **Describe electrocardiograms**

Competency Builders:

Explain a 12-lead electrocardiogram
Discuss use of Holtor monitors
Observe patient undergoing EKG testing

Unit: Radiography

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Identify characteristics of x-radiation**

Competency Builders:

Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Differentiate between ionizing and non-ionizing radiations
Compare different methods of measuring x-radiation
Compare different types of radiation (e.g., alpha, beta, natural, man-made)

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Describe effects of radiation on the human body**

Competency Builders:

Explain somatic and genetic effects of x-rays
Identify tissues most and least sensitive to radiation
Differentiate among exposure variables and their effects, both acute and chronic
Describe methods for reducing patient exposure
Explain methods of operator protection
Identify common methods of personnel monitoring
Describe LD 50/30 (e.g., Lethal Dose)
Explain Dose Equivalent Limit

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Practice radiation safety procedures in accordance with OSHA and EPA**

Competency Builders:

Adhere to safe radiation practices

Demonstrate radiation safety precautions for patients

Demonstrate radiation safety precautions for operators

Comply with equipment safety laws

Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities, injection of an iodinated contrast medium)

Wear radiation monitoring device(s) while on duty

Document personal radiation exposure

Question female patients about possible pregnancy and alert physician

Remove all unnecessary persons from area prior to taking radiograph

Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)

Place protective shield(s) over patient's radio-sensitive organs prior to exposure

Minimize personal and patient radiation exposure through principles of time, distance, and shielding

Demonstrate appropriate infection control technique(s) when radiographing a patient in isolation

Report radiologic accidents and/or spills immediately to proper authorities

Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure; contrast media reactions; respiratory/cardiac distress)

Practice universal precautions

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Prepare patient for radiographic procedures**

Competency Builders:

Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)

Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure, contrast media reactions; respiratory/cardiac stress)

Assist patient in moving, transferring and ambulating

Explain procedure to patient to relieve anxiety and gain patient's cooperation during procedures

Give patient appropriate breathing instructions prior to making exposure

Assist physician in observing vital signs

Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)

Assist physician with radiographic procedure if requested

Monitor medical equipment attached to patient while in radiology department (e.g., IVs, oxygen)

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Perform venipuncture and IV management**

Competency Builders:
Differentiate venous from arterial vessel
Locate appropriate site for venous access
Prepare skin using aseptic technique
Introduce needle/catheter to selected vein
Monitor site for extravasation
Discontinue IV
Administer IV contrast material

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Demonstrate principles of proper body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics

Identify common causes of back injuries

Demonstrate proper body mechanics used in lifting, moving, transferring, ambulating, and positioning patient

Assist patients with adaptive devices and/or attached medical equipment during movement

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Demonstrate general knowledge of diagnostic radiology procedures**

Competency Builders:
Describe common radiological procedures
Perform common radiological procedures
Describe common fluoroscopic procedures
Perform common fluoroscopic procedures
Describe computer tomography as an imaging modality
Describe common mammography procedures
Describe common computerized tomography procedures
Describe common magnetic resonance procedures
Describe common sonography procedures
Describe common special procedures
Describe common nuclear medicine procedures
Describe common quality assurance procedures
Describe common radiation therapy procedures
Differentiate between diagnostic and therapeutic radiology
Describe common surgical procedures, to include c-arm equipment
Describe common contrast exams

BIL: Essential

EDU:	12	AD	AC
		P	M,S,C

Competency: **Explain how x-rays are produced**

Competency Builders:

Identify the different parts of the x-ray tube
Describe the process for production of x-radiation
Differentiate among the different types of radiation produced
Describe radiographic density (e.g., contrast and detail)
Explain the Inverse Square Law and its effect on x-ray production
Apply radiographic formulas and their effect on x-ray production
Explain Ma, KvP and time and their relationship on x-ray production
Describe factors that affect radiographic density, contrast, detail, and distortion

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Demonstrate knowledge of pathological processes that affect radiographic imaging**

Competency Builders:

Differentiate between additive and destructive pathologies
Identify pathological processes that affect each body system
Correlate pathological conditions on images from various imaging modalities

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Demonstrate knowledge of equipment**

Competency Builders:

Demonstrate the function of a diagnostic x-ray unit
Demonstrate the function of a fluoroscopic unit
Demonstrate the function of a portable x-ray unit
Demonstrate the function of a portable c-arm unit

BIL: Essential

EDU:	12	AD	AC
		P	S,M,C

Competency: **Prepare equipment and materials for radiographic procedures**

Competency Builders:

Differentiate among catheters, dilators, guidewires, and needles by size, type, and/or function
Warm up x-ray tube to achieve proper operating conditions
Measure appropriate patient parts for requested examination
Identify appropriate exposure factors
Modify exposure factors for circumstances (e.g., body hibitus, voluntary and involuntary motion, pathological conditions)
Restrict beam exposure to area of interest
Set appropriate exposure factors to achieve optimum image quality
Perform radiographic examination in a sequence which avoids or minimizes undesirable effects
Check radiographs to verify they contain proper identification and are of diagnostic quality
Identify corrective measure if radiograph is not of diagnostic quality
Clean patient and/or equipment to remove anything that might interfere with radiograph quality
Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested
Utilize sterile technique
Respond to malfunctioning medical equipment
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Differentiate among contrast media
Prepare contrast media accurately when appropriate
Obtain immobilization devices when necessary
Obtain adequate cassettes and accessories

BIL: Essential

EDU:	12	AD	AC
		P	S,M,C

Competency: **Perform radiographic equipment check procedures**

Competency Builders:

Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Demonstrate knowledge of quality control and quality assurance procedures
Collect data for ongoing quality assurance monitoring

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Provide accurate radiographic record identification and retrieval**

Competency Builders:
Record required information following performance examination
Retrieve radiographic patient records (e.g., radiographs or reports)
Identify patient using information on request form
Confirm patient's identity by checking wristband and/or by questioning patient
Imprint proper patient identification and markers onto film
Verify correctness of patient identification and markers on film
Combine radiographic requisition with radiographs for interpretation and filing
Check radiographic requisition to verify accuracy of information

BIL: Essential

EDU:	12	AD	AC
		P	S,C,M

Competency: **Perform radiographic procedures**

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Apply universal precautions
Adjust radiographic factors on x-ray equipment
Employ infection control procedures
Align patient, radiographic/fluoroscopic unit, and image receptor to product images of requested anatomical structures/systems
Use immobilization devices as needed
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Initiate rotor prior to making exposure
Give patient appropriate breathing instructions prior to making exposure
Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning
Identify corrective measure if radiograph is not of diagnostic quality

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Expose radiographic film**

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Adjust radiographic factors on x-ray equipment
Apply infection control procedures
Position patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems
Use immobilization devices as needed

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Process exposed radiographic film**

Competency Builders:

Follow manufacturer's instructions for x-ray processors and solutions
Mix solutions for developing and fixing radiographic film
Follow darkroom procedures
Unload cassettes
Handle film properly
Read thermometer
Interpret time and temperature chart
Load film into processor
Follow safety precautions to prevent eye injury and minor burns
Dispose of mixed solutions in accordance with EPA regulations
Reload cassettes
Clean equipment
Monitor performance of automatic processor using sensitometry
Report malfunctions in automatic processor

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Store radiographs and unexposed film**

Competency Builders:
Handle film(s) properly
Hang radiographs on viewboxes in proper orientation
File radiographs
Check expiration date
Store exposed and unexposed film properly

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Maintain supply inventory**

Competency Builders:
Identify supplies to be kept in stock
Identify appropriate stock levels
Organize supplies
Re-order supplies
Maintain a clean working environment

Unit: Respiratory Care

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Identify respiratory care uses**

Competency Builders:
List areas in which respiratory therapy is involved with patient services
Describe the rationale for lung expansion therapy
List categories of diagnostic and patient monitoring procedures
List procedures provided by respiratory therapy
List conditions/diseases of patients who receive respiratory therapy treatment
List indications for oxygen therapy
List indications for aerosol and humidity administration
List indications for the use of chest percussion/chest physiotherapy
List indications for naso-tracheal, endotracheal, tracheal suctioning
List goals of pulmonary rehabilitation and patient education
Differentiate between educational programs of various respiratory care practitioners

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Prepare non-life support respiratory therapy equipment for patient use**

Competency Builders:
Explain purpose and application of non-life support equipment
Identify components and ancillary equipment of non-life support equipment
Identify oxygen administration devices
Identify aerosol generators, croup tents, and vaporizer
Identify humidifiers
Identify gas delivery, metering, and analyzing devices
Identify vacuum system components
Identify patient breathing circuits
Identify manometers and gauges
Verify proper assembly of non-life support equipment
Disassemble non-life support equipment

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Prepare life-support equipment for patient use**

Competency Builders:
Explain purpose and application of life-support equipment
Identify life-support equipment
Identify the components and ancillary equipment of life-support equipment
Verify proper assembly of life-support equipment
Disassemble life-support equipment for cleaning
Identify and apply appropriate ventilation mode
Maintain appropriate parameters as related to clinical status
Discontinue life support as required
Identify safety features
Identify alarms
Identify electrical and pneumatic supplies to ventilator
Set-up ventilator
Perform calculations
Assess proper function
Perform ventilation system check

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage airway as appropriate for certification/ discipline**

Competency Builders:

Select appropriate Laryngoscope size ET tube
Insert and/or manage ET tube
Insert and/or manage trach tube
Insert and manage oral airways
Insert and manage nasopharyngeal
Suctioning of/care of laryngoscope equipment, inteubation, extubation, trach buttons, speaking valve
Identify correct tube placement

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Perform rehabilitation**

Competency Builders:
Instruct pursed lip breathing
Instruct diaphragmatic breathing
Instruct cough control
Instruct diet
Instruct exercise conditioning
Instruct activities of daily living
Instruct bronchial hygiene techniques (e.g., Aerochamber, Inhalers)
Instruct smoking cessation

BIL: Essential

EDU:	12	AD	AC
		P	M,C,S

Competency: **Manage pharmacological agents**

Competency Builders:

Administer and evaluate steroids
Administer and evaluate bronchodilators
Administer and evaluate antiviral
Administer and evaluate mucolytics
Administer and evaluate antibiotics
Administer and evaluate bronchoconstrictors
Administer and evaluate nicotene therapy
Administer and evaluate artificial surfactant
Administer and evaluate antipneumocystis
Administer and evaluate topical anesthetics
Administer and evaluate expectorants
Administer and evaluate vasoconstrictors
Administer and evaluate mast cell stabilizer

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Perform assessment**

Competency Builders:
Assess level of consciousness
Evaluate level of activity
Assess WOB (e.g., work of breathing)
Evaluate cough
Obtain smoking history
Assess occupational exposure
Obtain family history
Measure chest excursion
Assess level of dyspnea
Assess color
Assess clubbing of fingers
Assess use of accessory muscles
Assess position (e.g., tripoding)
Assess breathing patterns (e.g., Cheynes Stokes)
Assess breath sounds (e.g., wheeze, rhonchi, rales)
Interpret lab values
Evaluate chest radiograph
Obtain and evaluate sputum cultures
Obtain and evaluate EKG

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Demonstrate proper procedures for using flowmeters, regulators, gauges, and compressed gas cylinders**

Competency Builders:

Identify the potential dangers associated with the use and transportation of oxygen
Identify safety measures associated with the use, transportation, and storage of oxygen
Outline the procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders
List methods by which medical gas cylinders are identified
Identify medical gases
Identify oxygen conserving devices

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Change non-life support equipment in patient care areas of a hospital**

Competency Builders:

Differentiate between life-support and non-life support equipment

Identify safety measures to be taken before, during, and after changing non-life support equipment

Demonstrate proper communications with the patient whose equipment is being changed

Outline procedure for changing an oxygen delivery device which is in use on a patient

Verify proper operation of non-life support equipment

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Explain pulmonary pathology**

Competency Builders:
Identify common diseases
Identify diagnostic criteria
Identify accepted treatments

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Plan for discharge**

Competency Builders:

Recognize need and arrange for referrals
Conduct home visits
Develop plan of service
Develop plan of care
Assess medical necessity
Demonstrate use and care of home respiratory equipment

BIL: Recommended

EDU:	12	AD	AC
		I	S,C,M

Competency: **Prepare or demonstrate special procedures**

Competency Builders:
Assist with bronchoscopy
Assist with thoracentesis
Perform pulmonary and cardiac stress testing
Assist cardioversion
Perform defibrillation
Assist transtracheal aspiration
Manage transtracheal catheters
Perform sleep apnea studies
Manage apnea monitors
Manage chest tubes
Manage chest drainage systems

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Demonstrate manual ventilation and suctioning**

Competency Builders:

Identify patient

Describe differences between manual ventilation equipment

Identify indications, contraindications, hazards, and side effects of manual ventilation and suctioning

Determine if patient is a candidate for suctioning according to CPG (Clinical Practice Guidelines)

Determine type of suction appropriate for the patient

Explain proper vacuum range for suctioning

Demonstrate ability to suction properly maintaining sterile technique

Demonstrate ability to manually ventilate patient

Document and notify appropriate personnel

Assess patient response

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Perform bronchopulmonary hygiene**

Competency Builders:

Identify patient
Determine if patient is a candidate for bronchopulmonary hygiene according to CPG
Explain indications, contraindications, hazards, and side effects of BPH
Demonstrate ability to position patient properly for drainage of all lung segments
Demonstrate proper technique to effectively perform BPH
Document patient response
Verify MD order

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Administer respiratory therapy medications**

Competency Builders:

Identify patient
Verify accuracy and completeness of medication order
Explain purpose of respiratory medications to patient
Explain indications, actions, contraindications, side effects and hazards of respiratory medications
Demonstrate proper assembly of aerosol delivery device
Calculate dosages of respiratory therapy medications
Document patient/client response to medication

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Perform neonatal/pediatric respiratory care**

Competency Builders:

Identify anatomical differences between neonates/pediatrics and adults
Describe various abnormalities of neonates
Describe different cardiopulmonary disease processes specific to neonates/pediatrics
Demonstrate ability to calculate medication dosages appropriate to age and weight
Identify differences in mechanical ventilation specific to pediatrics/neonates

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Prepare diagnostic equipment for patient use**

Competency Builders:

Explain purpose and application of diagnostic equipment
Identify diagnostic equipment
Identify the components and ancillary equipment of diagnostic equipment
Assemble portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume for patient use
Disassemble portable spirometers, and electronic devices used to record flow, compliance, resistance, rate, and volume for cleaning
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function
Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG
Identify parts of Swan Ganz catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters
Demonstrate ABGs/co-oximetry equipment
Demonstrate pulse oximetry equipment
Demonstrate transcutaneous O2 and CO2 equipment
Demonstrate end tidal CO2 equipment

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Disinfect or sterilize respiratory therapy equipment**

Competency Builders:

Define particulates, bacteria, viruses, fungi, rickettsiae, and spores
Describe infectious hazards regarding respiratory therapy equipment
Differentiate between disposable and reusable equipment
Package components and ancillary equipment for sterilization
Identify methods for sterilizing and disinfecting reusable equipment
Outline proper cleaning, disinfecting, and sterilizing methods
Demonstrate safe practice in cold liquid disinfection and sterilization
Demonstrate safe practice in gas sterilization
Explain how spore strip is used in guarantee sterilization of equipment
Explain why proper dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients
Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders**

Competency Builders:

List indications for O2 therapy
Identify and utilize O2 administration devices
Identify and utilize gas delivery and analyzing device, metering
Identify and utilize the potential dangers, safety measures and procedures associated with the use, transportation and storage of medical gases
List methods by which medical gas cylinders are identified
Differentiate Pin Index Safety System, Diameter Index Safety System and Compressed Gas Association (CGA) Safety System
Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration
Identify tools necessary to remove the regulator from a compressed gas cylinder
List possible hazards involved in changing the regulator on a compressed gas cylinder
Explain procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders
Verify proper operation of flowmeters, regulators, gauges, and compressed gas cylinders
Define bulk gas system
Define and identify the components of a manifold system
Define and identify the components of a piping delivery system
Identify items to be monitored in a bulk manifold compressed gas system
Explain LOX systems safety and hazards

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Test respiratory therapy equipment for proper operation and patient readiness**

Competency Builders:

Verify that equipment components are assembled properly with all necessary accessories
Check safety check of all components
Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging
Verify all equipment functions as required
Document faulty or defective equipment
Troubleshoot equipment for proper function
Change equipment as needed
Follow manufacturer's instructions for safe operation of the equipment

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Demonstrate proper safety precautions in the transport and delivery of equipment**

Competency Builders:

Outline methods of safe movement of equipment through a hospital environment

Identify safety measures related to the delivery and placement of the equipment in patient care areas of a hospital environment

BIL: Essential

EDU:	12	AD	AC
		P	M,C,S

Competency: **Perform hemodynamic monitoring**

Competency Builders:
Identify parts of Swan Ganz catheter
Insert artering blood catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters

BIL: Essential

EDU:	12	AD	AC
		P	M,C,S

Competency: **Operate mechanical ventilator**

Competency Builders:
Identify safety features
Identify alarms
Identify electrical and pneumatic supplies to ventilator
Set-up ventilator
Perform calculations
Assess proper function
Perform ventilation system check

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Perform electrocardiograms**

Competency Builders:
Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG

BIL: Essential

EDU:	12	AD	AC
		P	M,S,C

Competency: **Evaluate chest x-rays**

Competency Builders:
Identify normal versus abnormal
Identify tube placements
Identify relationship to pulmonary diseases

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Perform pulmonary function tests**

Competency Builders:
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Demonstrate therapeutic modalities**

Competency Builders:
Demonstrate small volume aerosol and list indications
Demonstrate large volume aerosol and list indications
Demonstrate ultrasonic nebulizer and list indications
Demonstrate chest percussion and list indications
Demonstrate lung expansion and list indications
Demonstrate noninvasive ventilation and list indications
Demonstrate dose inhalers and spacers and list indications

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Demonstrate knowledge of proper procedures for changing and monitoring bulk manifold compressed gas cylinders**

Competency Builders:

Define bulk gas system, include lox (e.g., liquid oxygen)
Identify the components of a manifold system
Identify the components of a piping delivery system
Identify items to be monitored in a bulk manifold compressed gas system
Demonstrate proper technique for backfeeding oxygen supply
Explain operation and use of zone valves

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Classify mechanical ventilators**

Competency Builders:

Identify model of ventilator (including safety features and alarms)
Identify various modes of ventilation
Identify type of ventilators (volume vs. pressure)
Identify electrical and pneumatic supplies to ventilator

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Wean patient from mechanical ventilator**

Competency Builders:

Assess patient
Identify criteria for weaning
Demonstrate ability to properly interpret weaning data
Demonstrate extubation procedure
Identify equipment needed for weaning and extubation

BIL: Recommended

EDU:	12	AD	AC
		I	C

Competency: **Resuscitate neonates/pediatrics**

Competency Builders:

Obtain certification in code pink or neonatal advanced life support
Obtain certification in pediatric advanced life support

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Demonstrate proper procedure for hyperinflation**

Competency Builders:

Identify patient

Determine if patient is a candidate for hyperinflation therapy according to clinical practice guidelines

Determine proper hyperinflation technique for the patient

Identify contraindications and hazards of hyperinflation therapy

Demonstrate proper hyperinflation techniques (IPPB and SMI)

Monitor patient and document therapy given appropriately

Unit: Physical Therapy

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Define patient needs**

Competency Builders:

Obtain data through patient/responsible party interview
Gather information from medical record
Observe patient
Identify activities of daily living, work, and leisure
Identify architectural barriers to patient mobility
Identify contraindications for treatment
Identify need for intervention (e.g., occupational therapy, speech therapy)
Adjust treatment activities in accordance with patient tolerance
Demonstrate proper methods of positioning and draping patient
Provide for patient privacy
Consult with physical therapist
Observe, document, and report patient progress

BIL: Recommended

EDU:	12	AD	AC
		P	S

Competency: **Monitor patient progress**

Competency Builders:

Perform goniometry
Perform manual muscle test
Record measurements (e.g., wounds, edema, atrophy)
Describe progress as defined by goals
Define changes in patient status (e.g., strength, pain, functional skills)
Document progress in patient's record
Define quality improvement process
Demonstrate knowledge of commonly used manual test
Perform home and community re-entry and job simulations

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Develop therapeutic interventions**

Competency Builders:
Gather data from assessments
Prioritize patient problems
Identify realistic goals
Identify length of time to achieve goals
Identify therapeutic procedures that have potential for achieving goals
Identify the influence of biological, psychological, cognitive, social, and cultural factors on compliance and achievement of goals
Contribute to the development of the treatment plan
Explain plan of treatment and goals to patient responsible party
Consult with physical therapist (e.g., treatment termination)
Review prescribed orders
Refer to other community resources as needed
Participate in discharge planning
Identify medications and potential side effects

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Perform therapeutic measures**

Competency Builders:

Collaborate with the physical therapist
Prepare treatment area
Prepare equipment and modalities
Prepare patient for treatment
Explain indications, contraindications and possible side effects of treatment
Assist patient with relaxation exercises
Assist patient with strengthening exercises
Assist patient with range of motion exercises
Assist patient with endurance exercises
Assist patient with balance exercises
Assist patient with gross motor coordination
Assist patient with gait training
Assist patient with neurological techniques (e.g., NOT, PNF)
Perform manual therapy techniques
Instruct patient in functional activities (e.g., mobility, transfers)
Assist patient with work-hardening activities
Assist with paraffin treatment
Assist with hydrotherapy
Assist with fluidotherapy
Assist with diathermy
Assist with contrast bath
Apply hot packs
Apply cold therapy (e.g., cryotherapy)
Perform ultrasound techniques
Apply therapeutic electrical stimulation (e.g., TENS, MENS, NMES)
Apply ultraviolet treatment
Apply mechanical traction
Apply intermittent venous compression
Assist with prosthetic training
Assist with use of orthotics

Measure for custom pressure gradient garments
Assist with use of pressure garments
Apply bandages
Apply dressings
Perform wound debridement
Perform therapeutic massage
Perform tilt table treatment
Assist in set-up and removal of electromyogram (EMG) biofeedback equipment
Monitor patient use of therapeutic equipment
Instruct patient in use of body mechanics
Monitor medical equipment attached to patient during treatment (e.g., oxygen, IVs, catheters, drainage tubes)

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Demonstrate basic knowledge of kinesiology**

Competency Builders:

Define terminology related to kinesiology
Explain the basis for structural kinesiology
Identify all bones in the appendicular skeleton
Identify the thorax, vertebral column, and skull in the axial skeleton
Identify the types of joints and their respective movements
Explain basic mechanics of muscular action (e.g., structural muscle types, attachments, types of contractions, and neuromuscular basis)
List actions of particular muscles, including origin and insertion in shoulder girdle, shoulder joint, elbow, wrist, hand, fingers, hip joint, knee joint, ankle/foot, and cervical, thoracic, and lumbar spine
Perform muscular analysis of selected exercises and activities
Describe selected exercises and activities using skeletal, muscular, and movement terminology and muscular analysis
Describe methods of inhibition or facilitation of motor responses and principles of sensory integration
Explain basic skills of athletic performance and physical fitness

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Use physical therapy equipment**

Competency Builders:
Identify need
Refer for resources
Seek prescription or refer to outside source if needed
Request letter of justification from physical therapist
Instruct patient/responsible party in correct use of equipment
Assess performance of equipment
Adjust and modify equipment
Request termination of equipment with physical therapist and doctor
Document outcome
Identify principles of using adaptive equipment

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Assist in ongoing assessment**

Competency Builders:
Conduct an interview
Screen patient for need of re-evaluation
Explain re-evaluation plan
Administer standardized test
Consult with physical therapist regarding recommendations
Record test results and recommendations

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Perform patient chart review**

Competency Builders:

Review record for appropriate signatures (e.g., co-signatures)

Review record for completeness of information (e.g., progress notes, treatment logs, discharge summary information)

Determine time period to be covered by evaluation/re-evaluation

Participate in peer review

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Maintain current certification and continuing education/professional code of ethics**

Competency Builders:

Maintain AHA/ARC standards for CPR proficiency
Prepare for state licensing exam
Maintain American Physical Therapy Association (APTA) standards of practice and code of ethics

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Identify and respond to special care situations**

Competency Builders:

Provide care for the needs of geriatric, mentally/physically challenged, non-English-speaking, and psychologically disturbed patients
Manage behavioral emergencies including disruptive patients
Provide care for the terminally ill
Describe aspects of scene safety

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Apply Center for Disease Control (CDC) guidelines**

Competency Builders:

Identify ways communicable diseases can be transmitted
Demonstrate knowledge of CDC guidelines
Practice universal precautions
Describe procedures for reporting and follow-up after exposure to a communicable disease
Describe methods used to disinfect equipment and vehicles involved with an infectious patient

BIL: Recommended

EDU:	12	AD	AC
		I	C,S,M

Competency: **Perform record keeping to maintain billing records**

Competency Builders:
Retrieve information to complete records
Encode records (e.g., ICD & CPT; Dept. specific codes)
Monitor codes to assure timeframes
Consult with physical therapy regarding billing (e.g., 3rd party payers, frequency parameters)
Implement changes in policies & procedures

BIL: Essential

EDU:	12	AD	AC
		P	

Competency: **Use of orthotics**

Competency Builders:
Identify need
Consult with physical therapy
Select or design a pattern
Select euqipment/materials
Construct orthosis
Seek prescription or refer to outside source if needed
Fit or modify orthosis
Write instructions for care and usage
Document outcome

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Treat patient in functional activities**

Competency Builders:
Instruct patient in dressing
Instruct patient in edema control techniques
Instruct patient in proper positioning techniques
Instruct patient in time-management
Instruct patient in employment preparation
Instruct patient in object manipulation
Instruct patient in play and leisure activities
Instruct patient in relaxation techniques
Instruct patient in assertive behaviors
Instruct patient in energy conservation techniques
Instruct patient in joint protection techniques
Instruct patient in use of public transportation
Instruct patient in transfer techniques
Instruct patient in wheelchair mobility
Instruct patient in bed mobility
Instruct patient in use of orthosis
Instruct patient in use of prosthesis
Instruct patient in use of adaptive equipment
Retrain patient in hand dominance

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Engage patient in purposeful activities**

Competency Builders:
Involve patient in fine and gross motor coordination activities
Involve patient in strength activities
Involve patient in to social skill improvement activities
Involve patient in endurance activities
Involve patient in range of motion activities
Involve patient in reflex integration activities
Involve patient in sensory awareness activities
Involve patient in sensory motor integration activities
Involve patient in visual perception activities
Involve patient in body awareness activities
Involve patient in cognitive skill activities
Involve patient in cognitive integration skill activities
Involve patient in self-concept activities
Involve patient in situational coping skill activities
Involve patient in balance activities
Involve patient in community involvement activities

Unit: The Nursing Process

BIL: Essential

EDU:	12	AD	AC
		P	S,C,M

Competency: **Perform patient assessment**

Competency Builders:
Put patient at ease
Provide privacy
Demonstrate techniques used in patient assessment (e.g., communication, inspect, auscultate, percuss, palpate)
Evaluate patient's level of comfort, discomfort and pain
Perform assessment of all systems
Complete assessment forms
Document findings
Compare to norms and medical diagnoses
Communicate abnormal findings to physician

BIL: Essential

EDU:	12	AD	AC
		P	S,C,M

Competency: **Collect additional patient data**

Competency Builders:

Observe psychological signs and symptoms
Assess ability to perform ADL's
Gather relevant data and demographics from patient, responsible party, health records and health care team members
Complete health history, including prescribed /OTC drugs, patterns and immunization/allergfy history
Observe interaction of patient and/or responsible party
Observe patient response to care
Document additional assessment findings
Assess development age of the patient

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Formulate nursing diagnoses**

Competency Builders:

Identify actual or potential health care needs on the basis of analysis and interpretation of assessment data
Establish nursing diagnosis according to prevailing standards of nursing practice
Identify difference between medical and nursing diagnosis
Prioritize diagnoses

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Formulate patient plan of care**

Competency Builders:

Participate with the patient, responsible party, and health care team to identify patient-centered goals and objectives
Incorporate patient's cultural and spiritual beliefs into plan of care
Incorporate patient's physiological, psycho-social, and developmental needs and strengths into plan of care
Develop teaching plan
Develop discharge plan
Utilize available resources
Identify priorities for care
Write plan of care
Establish timeframe for nursing interventions
Describe nursing interventions and outcomes

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Implement safe, effective, comforting patient-centered nursing care across the life-span**

Competency Builders:

Implement plan of care according to priority of needs
Adjust priorities as patient needs change
Demonstrate competency in nursing skills
Promote rehabilitation potential of patient
Promote psychological well-being of the patient and significant others
Provide for continuity of care
Make referrals on the basis of patient need and available resources (e.g., community, responsible party)
Respond to adverse reactions
Support dying patients and their significant others
Demonstrate principles of time management in organizing patient care
Incorporate safety measures into plan of care

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Evaluate outcomes of nursing care**

Competency Builders:

Describe/document effect of nursing interventions
Verify patient and/or responsible party compliance with planned care
Identify which outcomes/patient-centered outcomes have been met

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Revise plan of nursing care**

Competency Builders:

Reassess patient needs and outcomes of care
Utilize input from patient, responsible party, and health care team members
Modify goals to meet patient needs

Unit: Nursing Communication Skills

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Demonstrate effective patient interviewing techniques**

Competency Builders:
Identify methods to obtain information and support patient during interview
Describe factors that facilitate or hinder a patient interview
Apply principles of therapeutic communication
Evaluate response and patient outcomes
Practice confidentiality

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Report assessment of patient outcomes and nursing actions**

Competency Builders:

Explain the legal basis of specific charting guidelines and confidentiality issues

Identify measures employed to ensure documentation meets agency and legal standards

Document the assessment of patient and nursing actions in writing

Identify concise, accurate, and relevant information to convey to others with a need to know

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Implement a teaching plan for an identified patient learning need**

Competency Builders:
Differentiate teaching from learning
Identify the role of the nurse in health teaching
Explain ways to reinforce new knowledge
Describe factors which influence a patient's readiness to learn
Identify one or more learning needs of a patient or responsible person/support system
Identify guidelines for evaluating the effectiveness of the health teaching plan
Write a health teaching plan
Identify educational level and learning style of client and/or significant others
Verify learning

BIL: Recommended

EDU:	12	AD	AC
		I	C,S

Competency: **Demonstrate use of research strategies**

Competency Builders:
Identify resources relevant to patient care
Utilize findings relating to research in health care
Identify print and electronic methods used to research
Use the problem solving approach in nursing practice
Identify research problems that need to be studied
Utilize research data in nursing practice

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Apply management skills for patient care**

Competency Builders:

Identify the characteristics of an effective leader

Explain the significance of an organizational chart to communication units

Describe different approaches to management of nursing care (e.g., primary care, team nursing)

Contrast the advantages and disadvantages of each system of nursing care

Participate in a multi-disciplinary team

Prioritize

Identify and implement cost-effective methods of obtaining patient outcomes yet provide for safe, effective care

Identify legal criteria for delegating tasks

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Demonstrate knowledge of the evaluation process necessary for effective management of nursing care**

Competency Builders:

Construct an evaluation of nursing performance in measurable terms

Explain how the nursing audit contributes to quality assurance

Explain how medical and nursing audits are used by accrediting and regulatory agencies

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Demonstrate nursing management of groups of patients**

Competency Builders:

Assess the nursing needs of patients and the skill level of staff necessary to care for these patients, based on an analysis of acuity
Assess the staff necessary to care for these patients, based on an analysis of acuity
Set goals and priorities based on individual patient care needs
Collaborate with other members of the health care team to provide quality care
Provide coordinated and continuous patient care
Participate in multi-disciplinary team conferences
Assess knowledge level of staff and patients
Plan measures to assist patients and staff members to achieve goals
Assess and delegate, to ancillary personnel procedures/goals
Transcribe physician orders correctly in a timely manner
Give concise and pertinent report to the on-coming shift
Disseminate reports to appropriate units
Write discharge planning criteria for the patient
Evaluate the impact of nursing interventions by health care team members
Participate in quality assurance procedures within a health care institution or agency

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Discuss trends and issues in health care delivery**

Competency Builders:

Describe trends that are evident in promoting transcultural health care

Illustrate how a health care practitioner can participate in promoting cultural sensitivity in health care practice

Analyze various practice roles

Describe the legalities of the health care practitioner's expanding role

Discuss the purpose and functions of professional organizations including the American Nurses Association, National League for Nursing, State Board of Nurse Examiners and other regulatory agencies (e.g., JCAHO, Medicaid/ Medicare)

Discuss economic and political factors in health care delivery

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Explain the scope and standards of nursing practice**

Competency Builders:

Define evolution of nursing profession
Discuss components of Nurse Practice Act
Interpret laws pertinent to nursing practice
Examine the legislative process' impact on nursing practice

Unit: Nursing Clinical Procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Use safety and legal precautions in performing nursing procedures**

Competency Builders:
Identify procedure needed
Verify doctor order, as appropriate
Read procedure manual
Gather equipment
Explain procedure and expected outcome to patient/resident/client
Explain possible adverse reactions/complications
Document procedure and patient response
Communicate untoward response to physician
Verify patient identity
Provide for patient privacy

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Perform or delegate and evaluate basic care skills**

Competency Builders:
Provide for patient privacy when indicated
Assist patient with elimination
Change clothing
Give patient bath (e.g., assisted; complete)
Perform hygienic care for skin, hair, mouth, perineum, feet, nails
Apply athrombic hose
Administer backrub
Make different types of beds
Feed patient
Measure intake and output
Record intake and output
Prevent pressure areas
Provide care for relaxation and sleep
Demonstrate patient transfer and transport techniques
Demonstrate basic care of hearing aid
Assist with modifying patient food and fluid intake
Perform range of motion (ROM) exercises
Assure protective patient positioning

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Demonstrate safe, effective equipment operation in health care settings**

Competency Builders:

Demonstrate use of emergency cart

Demonstrate safe, effective use of basic therapeutic in patient care area or home

Demonstrate use of monitoring equipment

Explain use of basic life-support equipment

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Perform safe and effective non-invasive procedures, using standard precautions**

Competency Builders:
Demonstrate proper methods of positioning and draping a patient
Identify steps to admit patient
Inventory patient possessions
Utilize hot/cold therapies
Demonstrate patient restraint methods
Prepare patient for surgery
Receive patient from surgery
Administer post-operative care
Change ostomy appliance
Instruct in coughing and deep breathing exercises
Identify steps to transfer patient to another unit/facility
Remove sutures and staples
Provide postmortem care
Identify steps to discharge patient
Complete discharge summary
Perform cast care
Assist with sitz bath
Empty drainage systems
Create a sterile field
Apply pressure dressings
Provide skeletal traction care
Maintain internal feedings (e.g., nasogastric, gastrostomy)
Maintain chest tube
Provide care of surgical drains
Maintain central venous lines
Maintain intravenous (IV) infusions
Apply binders
Maintain oxygen devices
Maintain airway

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M,C

Competency: **Demonstrate invasive procedures safely and effectively, using standard precautions and protocols according to physician's order**

Competency Builders:

Administer enemas
Insert rectal tubes
Irrigate ostomy
Change dressings
Demonstrate vaginal irrigation/douche
Demonstrate oro/nasopharyngeal suctioning
Demonstrate tracheal suctioning
Irrigate wounds
Insert urinary catheter
Perform intermittent and continuous bladder irrigations
Maintain nasogastric tube
Remove tubes
Perform tracheostomy care
Perform decubitus care
Perform eye irrigation
Perform ear irrigation
Maintain artifical airway

BIL: Essential

EDU:	12	AD	AC
		P	S.C

Competency: **Assist with sterile procedures, using standard precautions**

Competency Builders:
Don sterile gloves, mask/faceshield, and gown as appropriate
Prepare patient for procedure(s)
Assist with procedure(s)
Carry out physician's orders
Assist with insertion and removal of sutures and staples
Remove contaminated dressing
Apply sterile dressing
Document procedure and patient response
Follow-up patient needs

Unit: Medication Use

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Maintain supply of medications**

Competency Builders:
Check inventory stock
Contact supplier
Rotate stock
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (e.g., comply with government regulations)

BIL: Essential

EDU:	12	AD	AC
	I	P	M,S,C

Competency: **Calculate dosage according to physician's orders**

Competency Builders:
Verify accuracy of medical orders
Use appropriate references for fact-finding and comparisons
Transcribe medication order
Calculate dosage (e.g., oral, parenteral, sublingual, pediatric)
Calculate intravenous dosage and rate of flow
Calculate intravenous dosage and rate of flow

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C,M

Competency: **Administer medications according to physician's orders as applicable to the profession**

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Identify correct anatomical sites
Identify dosage forms (e.g., oral, injectable, sublingual, transdermal, inhalant, instillation, topical, rectal, vaginal, and injectable)
Prepare oral medication
Administer medications
Document medication administration
Prepare intravenous injectable material and patient

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Evaluate response to medication**

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Clinical Chemistry

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C,M

Competency: **Use terminology related to clinical chemistry**

Competency Builders:
Define clinical chemistry terms
Spell clinical chemistry terms
Identify the designations used for weights and measures
Use the abbreviations for weights and measures

BIL: Essential

EDU:	12	AD	AC
	P	R	S,M

Competency: **Prepare solutions**

Competency Builders:
Prepare molar solutions
Prepare normal solutions
Prepare percentage solutions (e.g., w/w, w/v, v/v)

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Handle blood specimens for analysis**

Competency Builders:
List differences between serum, plasma, and whole blood
Use anticoagulants for each analysis performed
Explain effects of using improper anticoagulants
Explain ways to prevent hemolysis
Collect blood in collecting tubes for analysis (e.g., clotted, anticoagulant)

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Handle body fluids for chemical analysis**

Competency Builders:

List types of urine preservatives

Explain when different types of urine preservatives are used

Perform cerebral spinal fluid analyses

Perform analyses of other body fluids

BIL: Essential

EDU:	12	AD	AC
		P	S,M

Competency: **Perform kidney function and clearance tests**

Competency Builders:

Explain kidney function tests
Perform kidney function tests (e.g., creatinine)
List the normal values of kidney function tests
Explain kidney clearance tests
Perform kidney clearance tests (e.g., creatinine clearance)
List the normal values of kidney clearance tests
Calculate kidney function tests
Identify kidney related pathologies (e.g., renal failure)

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform liver function tests**

Competency Builders:
Identify liver function tests
Perform liver function tests
Identify tests that are elevated in liver disease
Identify liver enzymes and isoenzymes
List normal values of liver function tests
Identify abnormal values
Identify liver related pathologies (e.g., cirrhosis)
Identify tests that are elevated in obstructive jaundice
Identify tests that are elevated in hemolytic jaundice

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform glucose tests**

Competency Builders:
Define terminology related to carbohydrates
List the uses of carbohydrates by the body
Describe the tests for all carbohydrates and reducing substances
Describe the true glucose tests (e.g., glucose specific)
Perform blood tests for glucose
Perform urine tests for glucose
Perform spinal fluid tests for glucose
Perform oral glucose tolerance test
Perform intravenous glucose tolerance test
Differentiate among a normal glucose tolerance curve, a diabetic glucose tolerance curve, and a hypoglycemia curve
Identify normal values

BIL: Essential

EDU:	12	AD	AC
		P	S,M

Competency: **Perform protein tests**

Competency Builders:
List functions of proteins
List what makes up a total protein
Explain the A/G ratio
List body constituents made up of protein (e.g., hemoglobin, fibrinogen, enzymes)
Explain the methods of total protein analysis
List normal values of total protein analysis
Explain the principles of total protein analysis tests
Explain the various methods of albumin analysis
List the normal values of albumin analysis
Explain the principles of albumin analysis tests
Explain the various methods of globulin analysis
List the normal values of globulin analysis
Explain the principles of globulin analysis tests
Explain the principle of protein electrophoresis
Explain the various procedures for protein electrophoresis
Describe the proper migration pattern of the plasma proteins
Identify electrophoretic patterns in disease
Perform various methods for protein tests

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M

Competency: **Perform electrolytes tests**

Competency Builders:
Define cations and anions
Explain electrolyte balance
Define extracellular cations and anions
Define intracellular cations and anions
List the normal values of cations and anions
Perform tests for anions and cations
List abnormal values
Calculate anion gap
Explain methods of electrolyte testing

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform carbon dioxide tests**

Competency Builders:

Explain different carbon dioxide tests
Perform different carbon dioxide tests
Identify normal values of carbon dioxide tests
Identify abnormal values

BIL: Recommended

EDU:	12	AD	AC
		P	S

Competency: **Perform blood gas tests**

Competency Builders:
List normal blood gas values
Explain the various methods of blood gas analysis
Perform blood gas analysis
Identify abnormal values
Identify respiration acidosis/alkalosis
Identify metabolic acidosis/alkalosis

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Explain mineral metabolism**

Competency Builders:
List the minerals of the body
Describe mineral metabolism
List normal values
List abnormal values
Perform mineral analysis

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform enzyme analysis**

Competency Builders:

Describe methods of enzyme analysis
List the enzymes of the pancreas and their functions
Describe the tests used to determine pancreatic enzyme activities
List the enzymes and isoenzymes of the heart and their functions
List the order in which enzymes and/or isoenzymes of the heart rise and return to normal
Explain LDH1:2 flip
Explain the use of acid phosphatase
Perform various enzyme analysis tests
List the enzymes and isoenzymes of the liver and their functions
Explain the use of acid phosphatase
List the parts of the body that are rich in acid phosphatase
List normal ranges

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform thyroid gland tests**

Competency Builders:

Explain the function of the thyroid gland
Explain various thyroid function tests
Perform thyroid function tests
List normal values of thyroid function tests
Identify thyroid related pathologies (e.g., hyperthyroid disease)

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform tests for gout**

Competency Builders:

Explain the principle of the test for gout (e.g., uric acid)
Perform the test for uric acid
List the metabolism of purines in food
Explain how uric acid is formed

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform miscellaneous tests**

Competency Builders:
Perform gastric fluid analysis
Explain principles of electrophoresis
Perform therapeutic drug monitoring
Perform tests for drug abuse
Identify therapeutic values
Perform tests for HDL, LDL, VLDL, cholesterol, triglyceride, and other lipids

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Use laboratory instruments**

Competency Builders:
List the parts of the photoelectric colorimeter and their functions
Explain the principle of the photoelectric colorimeter
Use a photoelectric colorimeter
List the parts of the spectrophotometer and their functions
Explain the principle of the spectrophotometer
Explain the difference between a colorimeter and a spectrophotometer
Describe how light waves are measured
Use a spectrophotometer
Define terminology related to light and wavelengths
Calibrate a colorimeter and spectrophotometer
List the parts of a flame photometer and their functions
Explain the principle of the flame photometer
List the chemicals that are analyzed by the flame photometer
Use a flame photometer
List the parts of an atomic absorption spectrophotometer and their functions
Explain the principle of the atomic absorption spectrophotometer
List the uses of the atomic absorption spectrophotometer
List the parts of the fluorescence spectrophotometer and their functions
Explain the principle of the fluorescence spectrophotometer
List the tests performed on the fluorescence spectrophotometer
Use a fluorescence spectrophotometer
List the parts of continuous flow analysis and their functions
Perform continuous flow analysis
List the instruments that perform discrete analysis, the parts related to them, and their functions
Use discrete analysis instruments
List the parts of a random access analyzer and their functions
Explain the principle of the random analyzer
List the chemicals that are analyzed by a random analyzer
Use a random analyzer

List the parts of a radioimmunoassay (RIA) analyzer and their functions
Explain the principle of an RIA analyzer
List the chemicals that are analyzed by an RIA analyzer
Use an RIA analyzer
List the parts of an enzyme immunoassay (EIA) analyzer and their functions
Explain the principle of an EIA analyzer
List the chemicals that are analyzed by an EIA analyzer
Use an EIA analyzer
List the parts of a nephelometer analyzer and their functions
Explain the principle of a nephelometer analyzer
List the chemicals that are analyzed by nephelometer analyzer
Use a nephelometer analyzer
List the parts of an osmometer analyzer and their functions
Explain the principle of an osmometer analyzer
List the chemicals that are analyzed by an osmometer analyzer
Use an osmometer analyzer
List the parts of an ultraviolet spectrophotometer analyzer and their functions
Explain the principle of an ultraviolet spectrophotometer analyzer
List the chemicals that are analyzed by an ultraviolet spectrophotometer analyzer
Use an ultraviolet spectrophotometer analyzer
List the parts of a fluorescence polorization immunoassay (FPIS) analyzer and their functions
Explain the principle of an FPIS analyzer
List the chemicals that are analyzed by an FPIS analyzer
Use an FPIS analyzer
Use other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)

BIL: Essential

EDU:	12	AD	AC
		P	S,C

Competency: **Maintain laboratory instruments**

Competency Builders:

Maintain chemical analyzers including calibration, preventive maintenance and routine trouble shooting

Maintain other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)

Clean glassware and pipettes

Maintain glassware and pipettes

Record all maintenance performed

Unit: Immunohematology

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Use terminology related to immunohematology**

Competency Builders:
Define immunohematology-related terminology
Spell immunohematology-related terminology
Define secretors
Explain significance of secretors in immunohematology
Identify blood components

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Explain antigens and antibodies**

Competency Builders:

Explain the principle of antigen-antibody reactions
Describe the history of the ABO system and the Rh system
Chart the chemical structure of the H, A, and B antigens
Describe the antigens of the ABO system
Describe the antibodies of the ABO system
List the phenotypes and genotypes of the Rho(D) system
Explain the genetics of blood group antigen
Describe additional antigen systems (e.g., M&N, Duffy, Lewis, Kell)

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe antibodies**

Competency Builders:

List the five major immunoglobulins

List the immunoglobulins or antibodies that are important in the ABO and Rh systems

List the natural antibodies and their functions

List the 7S and 19S antibodies and their functions

Explain the function of bivalent or complete antibodies

Explain the function of univalent, incomplete, or blocking antibodies

Explain Zeta potential

Describe how the anti-human globulin helps in detecting the blocking, univalent, or incomplete antibody

Explain how anti-human globulin is produced

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Describe subgroups of A**

Competency Builders:
List the subgroups of A
Describe how subgroups of A are tested

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Describe enzyme tests**

Competency Builders:

List the enzyme tests that are used in immunohematology

Differentiate purposes and methods of enzyme tests used in immunohematology

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Describe Rh nomenclatures**

Competency Builders:

Explain Fisher-Race nomenclature
Explain Wiener nomenclature
Explain Rosenfeld nomenclature
Compare Fisher-Race, Wiener, and Rosenfeld nomenclatures

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform Du test**

Competency Builders:

Perform Du test in Rh typing
Perform Du test to choose donors for transfusions
Perform Du test for blood recipients

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Describe M and N systems**

Competency Builders:
Differentiate M and N systems
Use M and N systems in immunohematology

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Type blood**

Competency Builders:

Perform direct or forward blood group method
Perform reverse typing
Perform Rho(D) typing
Perform typing for subgroups of A
Perform genotyping
Explain the principle of the antiglobulin test
Explain the principle of the indirect antiglobulin test
Perform indirect antiglobulin test
Interpret indirect antiglobulin test
List the uses of the indirect antiglobulin test
Perform direct antiglobulin test
Interpret direct antiglobulin test
List uses of direct antiglobulin test
List drugs responsible for red blood cell sensitization that cause a positive direct antiglobulin test
Perform direct antiglobulin profile
Interpret the direct antiglobulin profile

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Crossmatch blood**

Competency Builders:

Explain the principle of the crossmatch procedure
Perform crossmatch procedure (e.g., anti-human globulin crossmatch)
Interpret results of crossmatch procedure
List reasons for autocontrol on crossmatch test
Perform autocontrol test with crossmatch
Explain reasons for using Coombs control test
Perform Coombs control test
List errors that can occur in the crossmatch procedure (e.g., overmixing after centrifugation, improper washing of Coombs tube before addition of Coombs serum)
Identify incompatible crossmatch
Perform follow-up procedures for incompatibility

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Use Rho(D) immune globin criteria**

Competency Builders:

Explain the principle of the Rho(D) immune globin

List to whom Rho(D) immune globin should be given

List indications as to when Rho(D) should be given

List the criteria used to declare patients candidates for receiving Rho(D) immune globin

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Elute antibodies**

Competency Builders:
Use heat elution to elute antibodies from red blood cells
Use freeze elution to elute antibodies from red blood cells
Use acid elution to elute antibodies from red blood cells

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Draw blood from donors**

Competency Builders:
Explain blood donor requirements
Perform therapeutic phlebotomies
Explain various physical criteria
Explain medical history criteria

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Operate blood bank**

Competency Builders:

Visibly inspect units of blood
Dispose of blood bags and patient samples
Store blood and blood products for transfusion
Investigate transfusion reactions
Investigate hemolytic diseases in newborn
Describe blood components
Describe the uses of blood components
Prepare blood for storage
Store blood
Perform quality control on all reagents
Record all quality control procedures
Check label to verify blood type
Identify patient specimen properly
Follow American Association of Blood Bank (AABB) protocols

Unit: Immunology and Serology

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Use immunology and serology terminology**

Competency Builders:
Define terminology related to immunology and serology
Spell terminology related to immunology and serology

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Perform immunologic examination**

Competency Builders:
Explain the principle of immunologic examination
Identify antigen-antibody reaction
Describe the relationship of T and B cells to antibody production

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Test for syphilis**

Competency Builders:
Define syphilis
Describe the stages of infection
Perform different types of serological tests for syphilis

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform serologic test for syphilis**

Competency Builders:
Perform qualitative VDRL and RPR tests
Perform quantitative VDRL and RPR tests
Perform fundamentals of complement-fixation tests
List quality control procedures for all immunologic tests
Perform quality control

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform agglutination tests**

Competency Builders:
Perform latex agglutination tests
Perform hemagglutination

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform immunologic and serologic procedures**

Competency Builders:

Explain theory of C-reactive protein (CRP)
Perform CRP
Explain theory of anti-Streptolysin screen (ASO) and titer
Perform ASO
Explain theory of heterophile agglutination
Perform heterophile quantitative with sheep cells, guinea pig, and horse serum absorption
Perform heterophile qualitative with latex agglutination or blood cell agglutination tests
Perform rheumatoid arthritis tests (e.g., latex agglutination)
Perform systemic lupus erythematosis (SLE or LE agglutination) tests
Perform red cell fragility tests
Perform anti-nuclear antibody tests
Perform antigen detection of organisms in spinal fluid (e.g., Directogen™ test and Bactogen™ test)
Perform fluorescent antibody procedures
Perform group typing of bacterial growth
Explain principles of test for radial immunodiffusion (RID)
Perform the test for RID
Perform serum pregnancy test (HCG)
Perform tests for hepatitis
Perform febrile agglutination tests
Perform monospot test
Differentiate among weil felix, widel, and febrile agglutination testing

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Explain tests for other viruses**

Competency Builders:

Explain test for cytomegaloviris
Explain test for retrovirus
Explain test for Epstein-Barr virus
Explain test for acquired immune deficiency syndrome (AIDS)

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Detect cold agglutinins**

Competency Builders:

Define cold agglutinins

Perform tests to detect cold agglutinins

Eliminate cold agglutinins when they interfere with blood grouping and/or crossmatching of blood

Unit: Bacteriology

BIL: Essential

EDU:	12	AD	AC
	P	R	S

Competency: **Use terminology related to bacteriology**

Competency Builders:

Define terms related to bacteriology
Spell terms related to bacteriology
Identify types of bacteria by shapes
Describe the growth curve of bacteria

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Identify types and uses of culture media**

Competency Builders:
Identify the different culture medias
List the uses of the different culture medias

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Culture specimens**

Competency Builders:

Select appropriate culture media

Use concentration methods for sputum specimens to be cultured for acid-fast bacilli

Culture sputums for acid-fast bacilli

Examine smears for acid-fast bacilli

Type cultures using type-specific typing sera

Perform proper plating techniques

List the uses of culture media (e.g., bile esculin agar, bismuth sulfite [BS], blood agar, Bordet-Gengou, brilliant green agar, chocolate agar with V and X factors, chopped meat glucose broth, cornmeal agar, cystine tellurite blood agar, desoxycholate agar, desoxycholate citrate agar, eosin methylene blue [EMB], Flides enrichment agar, Loeffler's, Lowenstein Jensen [L-J], MacConkey)

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Stain smears**

Competency Builders:

Explain staining procedures (e.g., Gram's, hot and cold acid-fast, Giemsa and Wright's, India Ink, fluorescent, and methylene blue)

Describe uses of different stains

Perform stains

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform differentiating tests**

Competency Builders:
Perform coagulase test
Perform bile exculin test
Perform bile solubility test
Perform catalese test
Perform oxidase test
Perform optochin disc test
Perform bacitracin disc test
Perform beta lactam disk test

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify gram-positive cocci**

Competency Builders:
Isolate gram-positive cocci
Identify gram-positive cocci
Differentiate one gram-positive cocci from another
Differentiate normal/pathologic flora

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify gram-positive bacilli**

Competency Builders:
Isolate gram-positive bacilli
Identify gram-positive bacilli
Differentiate one gram-positive bacilli from another
Differentiate normal/pathologic flora

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify gram-negative cocci**

Competency Builders:
Isolate gram-negative cocci
Identify gram-negative cocci
Differentiate one gram-negative cocci from another
Differentiate normal/pathologic flora

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify gram-negative enterobactereaceae**

Competency Builders:
Isolate gram-negative Enterobactereaceae
Identify gram-negative Enterobactereaceae
Differentiate genera and species
Differentiate normal from pathologic flora

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify gram-negative bacilli**

Competency Builders:

Isolate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (e.g., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)

Identify nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli

Differentiate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli

Differentiate normal from pathologic flora

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform antimicrobial sensitivity testing**

Competency Builders:
Use Kirby-Bauer system
Use MIC system
Use automated system

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Use bacterial identification systems**

Competency Builders:

Describe systems for bacterial identification (e.g., API, enterotube, automated systems, biochemical, and carbohydrate systems)
Perform bacterial identification using biochemical and carbohydrate system
Perform group typing of bacterial growth
Perform antigen detection of organism in spinal fluid (e.g., Dimetogen‰ test and Bactogen‰ test)

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Culture specimens**

Competency Builders:

Culture specimens (e.g., blood urine, stool [feces], sputum, throat, spinal fluid, urethral/cervical)

Use concentration methods for sputum specimens to be cultured for acid-fast bacilli

Culture sputums for acid-fast bacilli

Examine smears for acid-fast bacilli

Type cultures using type-specific typing sera

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform routine mycology procedures**

Competency Builders:
Perform KOH preparation
Perform methylene blue staining
Perform lacto-phenol cotton blue staining
Perform culture using Sabaroud agar
Use germ tube
Use cornmeal agar
Perform India ink preparation

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform special tests**

Competency Builders:
Perform group A streptococci rapid enzyme immunoassay test (or other detection kits) from throat swabs
Perform group A streptococci cultures for beta hemolysis screening
Perform clostridium difficile toxin test

Unit: Parasitology

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Use parasitology-related terminology**

Competency Builders:

Define terminology related to parasitology
Spell terminology related to parasitology
Identify types of parasites (e.g., protozoa, helminthes)
Describe types of parasites
Classify parasites

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform examinations for parasites**

Competency Builders:

Examine feces for parasites (e.g., macroscopic examination, microscopic direct saline and iodine preparations, and various concentration methods)

Examine blood, urine and other body fluids for parasites

Examine tissue for parasites

Perform direct method examination for intestinal parasites (e.g., protozoa, trematodes, cestodes, nematodes)

Perform concentration method examination for intestinal parasites

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Perform tests for blood parasites**

Competency Builders:
Perform test for malaria
Perform test for filaria
Perform test for trypanosomes

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Perform tests for fats and occult blood**

Competency Builders:
Prepare Sudan IV stain for fats
Examine stool for fats
Perform test for occult blood in stool

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Stain for ova and parasites**

Competency Builders:
Prepare permanent smears for ova and parasites
Stain permanent smears for ova and parasites using iron bematoxylin method
Stain permanent smears for ova and parasites using trichrome method
Describe the defining characteristics of the cryptosporidium species
Identify cryptosporidium
Stain cryptosporidium

Unit: Urinalysis

BIL: Essential

EDU:	12	AD	AC
	P	R	S,C

Competency: **Use terminology related to urinalysis**

Competency Builders:
Define terminology related to urinalysis
Spell terminology related to urinalysis

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Identify properties of urine**

Competency Builders:

Explain the formation of urine
Describe the anatomy of the kidney
Identify the physical properties of urine
Identify the chemical properties of urine
Identify the microscopic structures found in urine

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Explain principles of urine tests**

Competency Builders:

Explain the role of specific gravity in urine tests
Explain the role of pH in urine tests
Explain the role of protein in urine tests
Explain the role of glucose in urine tests
Explain the role of ketones in urine tests
Explain the role of occult blood in urine tests
Explain the role of nitrate in urine tests
Explain the role of bilirubin in urine tests
Explain the role of urobilinogen in urine tests
Explain the role of leukocyte esterase in urine tests

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Perform routine urinalysis and urine diagnostics**

Competency Builders:
Perform complete urinalysis
Perform tests for pregnancy

BIL: Recommended

EDU:	12	AD	AC
		P	S

Competency: **Perform special tests**

Competency Builders:
Perform Ictotest™ (Ames) for bilirubin
Perform Bence Jones protein test
Perform sulfosalicylic acid test for protein
Perform test for acetone
Perform tests for reducing substances

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify cells found in urine**

Competency Builders:
Identify blood cells found in urine
Describe blood cells found in urine
Identify types of epithelial cells found in urine
Describe types of epithelial cells found in urine
Explain the cause of each type of cell appearing in urine

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify casts found in urine**

Competency Builders:
Describe casts found in urine
Explain how casts are formed
Explain where casts are formed
Describe the causes of each type of cast found in urine

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Identify foreign matter found in urine**

Competency Builders:
Describe types of pathological crystals found in urine
Identify mucus found in urine
Explain the significance of mucus found in urine
Identify parasites found in urine
Explain the significance of parasites found in urine
Identify spermatozoa in urine
Explain the significance of spermatozoa in urine
Identify bacteria found in urine
Explain the significance of bacteria found in urine
Identify cylindroids found in urine
Explain the significance of cylindroids in urine
Identify yeast found in urine
Explain the significance of yeast found in urine
Identify amorphous material found in urine
Explain the significance of amorphous material found in urine

Unit: Hematology

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Use hematology terminology**

Competency Builders:

Define terminology related to hematology (e.g., erythrocytes, lymphopoieses)

Spell terminology related to hematology

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Demonstrate knowledge of erythrocytes**

Competency Builders:

Explain the life cycle and life span of erythrocytes

Explain the maturation series of an erythrocyte from its origin to its final destination in the peripheral blood stream

Explain the formation of bilirubin from the destruction of erythrocytes

Identify pathologies of erythrocytes (e.g., anemias)

Identify normal and abnormal values

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M

Competency: **Perform erythrocyte tests**

Competency Builders:

Explain automated erythrocyte testing
Identify normal erythrocyte values
Perform erythrocyte counts (automated and manual)
Perform hemoglobin determinations
Perform macrohematocrit and microhematocrit determinations
Perform tests used in erythrocyte indices (e.g., mean corpuscular volume—MCV, corpuscular hemoglobin—MCH, and corpuscular hemoglobin concentration—MCHC)
Explain principles and uses of erythrocyte sedimentation rate (ESR)
Describe the types and purpose of Wintrobe, Westergren, and sedimentation rates
Perform each ESR procedure
Perform mathematical calculations for MCV, MCH, and MCHC
Perform reticulocyte counts
Perform sickle cell tests
Perform fetal hemoglobin test

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Demonstrate knowledge of granulocytes, lymphocytes, and monocytes**

Competency Builders:

Explain the maturation series of the neutrophilic granulocytes
Explain the maturation series of the granulocytic eosinophils and basophils
Explain the maturation series of the nongranulocytes-lymphocytes
Explain the maturation series of the nongranulocytes-monocytes
Explain the maturation series of the thrombocytes (e.g., platelets)
Explain the origin and function of granulocytes, lymphocytes, and monocytes
Identify normal percentages of granulocytes, lymphocytes, monocytes, and thrombocytes
Identify pathologies of white blood cells (e.g., leukemia)
Identify pathologies of thrombocytes
Identify normal and abnormal values

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Prepare blood smear stains**

Competency Builders:

Make a blood film/smear
Use leukocyte alkaline phosphatase stain
Stain blood films using Wright's and Giemsa's stains
Stain thick smear for malaria
Make cytospin slide
Use Hansel stains on nasal secretions for eosinophiles
Stain bone marrow smears

BIL: Essential

EDU:	12	AD	AC
		P	S,M

Competency: **Perform blood counts and tests**

Competency Builders:
Identify functions and elements of blood
Describe the dimensions of the counting chamber
Calculate leukocyte and erythrocyte counts using counting chamber
Perform leukocyte counts
Perform thrombocyte counts
Perform white blood cell differential counts
Perform leukocyte counts on very low very high counts using the manual pipette method
Correct leukocyte counts in the presence of nucleated red blood cells
Describe principles of automated cell counters (e.g., Coulter principle and laser principle)
Perform reticulocyte counts
Perform direct eosinophile counts
Perform sickle cell tests
Perform fetal hemoglobin test

BIL: Essential

EDU:	12	AD	AC
		P	S,M

Competency: **Perform body fluid counts**

Competency Builders:
Perform thoracentesis fluid count
Perform pleural fluid counts
Perform spinal fluid counts
Perform joint fluid counts for cells and crystals

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Perform sperm counts**

Competency Builders:
Define motility
Describe morphological abnormalities
Analyze appearance
Analyze consistency

BIL: Essential

EDU:	12	AD	AC
		P	S,M

Competency: **Perform coagulation and hemostasis tests**

Competency Builders:
Describe principle of hemostasis
Explain the principle of prothrombin time (PT) test
Identify coagulation factors tested for when performing prothrombin time (PT)
Perform PT test
Explain the principle of partial thromboplastin time (PTT or APTT) test
Identify coagulation factors by Roman numeral and common name
Identify coagulation factors tested for when PTT test
Perform PTT or APTT test
Explain the principle of capillary bleeding and clotting time tests
Perform capillary bleeding and clotting time tests
Identify uses of Lee White coagulation time test
Perform Lee White coagulation time test
Perform Duke and Ivy bleeding time test
Identify uses of template bleeding time test
Perform template bleeding time test
Explain the principle of fibrinogen test
Perform fibrinogen test
Explain the principles of fibrin degradation test
Perform fibrin degradation product (FDP) and fibrin split product (FSP)
Explain the principle of fibrin monomere test
Perform fibrin monomere test
Identify uses of clot retraction test
Perform clot retraction test
Perform factor assays

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Maintain related instruments and equipment**

Competency Builders:
Demonstrate proper use of microscope and centrifuge
Demonstrate proper use of glassware and pipettes
Demonstrate proper use of automated coagulation and hematology equipment
Clean related instruments and equipment
Store related instruments and equipment
Report needed repairs

BIL: Essential

EDU:	12	AD	AC
	I	P	S,M

Competency: **Perform quality control**

Competency Builders:
Check temperature of coagulation instruments
Check temperature of hematology instruments
Check reagents of coagulation instruments
Check reagents of hematology instruments
Check maintenance of coagulation instruments
Check maintenance of hematology instruments
Perform manufacturer-specific quality control test procedures
Label reagents
Inspect reagents
Prepare reagents

Unit: Phlebotomy

BIL: Recommended

EDU:	12	AD	AC
	I	P	S,C

Competency: **Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions**

Competency Builders:

Identify the health care providers in hospitals and clinics
Describe the organizational structure of the clinical laboratory department
Discuss the roles of clinical laboratory personnel
Discuss the qualifications for clinical laboratory personnel
List the types of laboratory procedures run in the various sections of the clinical laboratory department
Describe the role of the clinical laboratory in assessing body functions

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Identify the phlebotomist's role as a member of a health care team**

Competency Builders:

Describe the various facilities and departments in which the phlebotomist interacts

Describe the major functions of the various facilities and departments in which the phlebotomist interacts

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe collection equipment, reagents, and interfering factors in blood collection**

Competency Builders:

Describe the types of patient specimens that are analyzed in the clinical laboratory
Describe the phlebotomist's role in collecting and transporting these specimens to the laboratory
List the supplies that should be carried on a phlebotomist's tray when collecting microspecimens
Describe substances that can interfere in clinical analysis of blood constituents
Describe procedures used to avoid interference in clinical analysis of blood constituents
List the types of equipment needed to perform a venipuncture
Explain the special precautions employed when collecting blood from a newborn infant
Explain the types of equipment needed to collect blood from a newborn infant
List the equipment needed to perform a heel stick collection on an infant

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Describe proper blood collection procedure, including handling complications that may arise**

Competency Builders:

Discuss the legal and ethical importance of proper patient/sample identification
Identify potential sites for venipuncture
Identify potential sites for capillary puncture
List what effects tourniquet, hand squeezing, and heating pads have on skin puncture
List what effects tourniquet, hand squeezing, and heating pads have on venipuncture
Establish a recollection policy
Identify criteria for rejection of a patient sample for testing
Describe why some sites are more difficult to draw blood from then others
Identify which sites are more difficult to draw blood from
Name frequent causes of phlebotomy complications
Explain frequent causes of phlebotomy complications

BIL: Essential

EDU:			
	12	AD	AC
	I	P	S,C

Competency: **Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety**

Competency Builders:
Identify the potential routes of infection
Identify the methods for infection prevention

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Explain the protocol for communication, transport, and processing specimens**

Competency Builders:

Explain the correct procedure for complying with the request for collection of routine specimens
Explain the correct procedure for complying with the request for collection of special specimens
Explain the rationale for the various methods of transport
Explain the procedure for processing specimens for routine testing from specimen labeling to result reporting manual or computer systems
Explain the reasons for processing procedures
Identify essential information that should be on the laboratory requisition or computer order entry
Describe the significance of time constraints for specimen delivery to the analytical area
Describe schedule constraints imposed by timed operational factors in the laboratory
Identify the precautions applicable to verbal test ordering and reporting
Evaluate results of quality control techniques in specimen collection
Implement corrective quality control techniques where indicated

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Apply quality control and safety procedures**

Competency Builders:

Describe a system for monitoring quality assurance in the collection of blood specimens

Identify policies and procedures used to assure quality in the obtaining of blood specimens

Design a strategy to implement a quality assurance program in specimen collection

Describe safety measures that should be followed at all times by the phlebotomist when collecting blood specimens

Evaluate electrical, radiation, and fire safety procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment**

Competency Builders:

Describe the protocol for preparing a patient for laboratory testing

Describe the preferred techniques for dealing with family and visitors during the blood specimen collection

Explain intra-laboratory communications techniques

Explain inter-laboratory communications techniques

Unit: Emergency Medical Technology I

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Apply Center for Disease Control (CDC) guidelines**

Competency Builders:
Identify ways communicable diseases can be transmitted
Demonstrate knowledge of CDC guidelines
Practice universal precautions
Describe procedures for reporting and follow-up after exposure to a communicable disease
Describe methods used to disinfect equipment and vehicles involved with an infectious patient

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Apply aseptic and sterilizing principles**

Competency Builders:

Follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary
Demonstrate use of sterilized equipment

BIL: Essential

EDU:	12	AD	AC
	I	P	S,C

Competency: **Conduct patient assessment for illness/injuries**

Competency Builders:

Assess pulse, blood pressure, respiration, and temperature (to include rate, rhythm, quality)
Assess level of consciousness
Assess pupil size and reaction
Assess skin color and temperature
Assess motor neurological status
Assess reaction to pain
Perform an examination for life threatening problems (e.g., primary/secondary survey)
Describe signs and symptoms of patient
Describe the etiology of the patient's condition
List five diagnostic signs in addition to the vital signs
Demonstrate technique for completing a total patient assessment, recording diagnostic signs and their normal states
Assess a trauma victim
Communicate (in proper sequence) patient assessment information
Record (in proper sequence) patient assessment information

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Treat airway obstruction and respiratory arrest**

Competency Builders:
Describe the basic mechanics of respiration
Maintain an open airway using nasal oropharyngeal equipment
Clear an obstructed airway
Provide appropriate oxygen therapy and ventilatory assistance
Perform mechanical suctioning of airway
Describe the significance of oxygen to body tissues, particularly the brain
List five components of the respiratory system and the functions of each
List three signs of adequate air exchange
Describe proper usage of oxygen therapy
Demonstrate safe handling of oxygen equipment

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Treat cardiac arrest**

Competency Builders:

Describe the basic mechanics of circulation
List signs of cardiac arrest
Perform CPR on adults, children, and infants
List three possible complications of CPR
List three instances when CPR may be terminated
Describe adjunctive equipment used in administration of CRP
Identify importance of continuing CPR during movement, extrication, and transport of cardiac arrest patient

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Treat bleeding and shock**

Competency Builders:

Identify the types and signs of external and internal bleeding
Control bleeding
Identify the types and signs of shock
Treat shock
Use pneumatic counter pressure devices appropriately

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Treat injuries of the head, neck, face, eye, and spine**

Competency Builders:

Describe the anatomy and physiology of the antonomic, central, and peripheral nervous system
List signs and symptoms of brain and spinal injuries
Demonstrate care of patients with injuries to skull, face, eye, and neck
Demonstrate care of patients with injuries to the brain and spinal cord
Demonstrate spinal immobilization techniques
Describe assessment(s) of motor, sensory, and perfusion of the extremities before and after assessment, extrication, and transfer
Describe position of the patient after sustaining injuries

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Treat injuries to the chest, abdomen, and genitalia**

Competency Builders:

Describe the anatomy and physiology of the abdomen, chest, and genitourinary system
Identify types, signs, and symptoms of injuries to the chest, abdomen, and genitalia
Demonstrate care of patients with injuries to the chest, abdomen, and genitalia
Demonstrate techniques of dressing and bandaging the chest, abdomen, and genitalia

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Demonstrate care for the pediatric patient**

Competency Builders:

Assess the pediatric patient
Initiate appropriate age-level treatment
Describe signs, symptoms, and treatment for croup/epiglottis
Identify normal vital signs in children
Explain management of fevers in children
Describe signs of child abuse
Report signs of child abuse

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Treat environmental emergencies**

Competency Builders:

Describe signs, symptoms, and treatment for patients suffering from heat cramps, heat exhaustion, heat stroke, hypothermia, and frostbite

Describe signs, symptoms, and treatment for patients exposed to water-related emergencies

BIL: Essential

EDU:	12	AD	AC
	P	R	C,S

Competency: **Maintain patient safety**

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IVs, catheters, oxygen tubing)
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate use of cot and immobilization equipment (e.g., side rails, cot straps, shoulder harness, child restraint seats, backboard straps, KED, collars)
Identify placement of patient call devices/emergency alert devices
Orient patient to surroundings
Identify techniques/procedures to patient

Unit: Emergency Medical Technology II

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Describe roles and responsibilities of the Emergency Medical Technician (EMT)**

Competency Builders:
Identify the roles and responsibilities of the EMT
Describe the importance of emergency care
Identify legal aspects of emergency care
Identify contributing agencies in local EMS system
List six areas of personal attitude and conduct expected of an EMT
Describe state requirements for EMT certification and recertification
Explain the EMT's role in the organ donation program
Describe the signs and symptoms of critical incident stress
Explain the need for critical incident stress debriefing

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Treat soft tissue injuries**

Competency Builders:

Describe the anatomy and physiology of the skin
Identify types, signs, and significance of various wounds
Provide basic wound care
Apply dressings and bandages to wounds
Describe how to care for a patient with an amputation and the care of the amputated part
List etiology of soft tissue injuries and potential complications of each
Describe importance of using aseptic technique in treating soft tissue injuries

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Treat musculo-skeletal injuries**

Competency Builders:

Describe the anatomy and physiology of the musculo-skeletal system
Identify types, signs, and symptoms of fractures, sprains, and dislocations
Select appropriate splint for treatment of presenting injury
Demonstrate techniques for immobilizing all fractures and dislocations
Identify mechanism of injury

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Treat medical emergencies**

Competency Builders:

List methods in which poisons can enter the body
Explain how to contact the appropriate poison control center
Describe the signs, symptoms, and treatments for poison overdose victims
Describe the signs, symptoms, and treatments for victims of venomous bites and stings
Describe the signs, symptoms, and treatments for victims of heart and respiratory diseases
Describe the signs, symptoms, and treatments for victims of cerebro-vascular incidents
Describe the signs, symptoms, and treatments for diabetic patients
Describe the signs, symptoms, and treatments for patients with communicable diseases
Describe the signs, symptoms, and treatments of allergic reactions
Describe the signs, symptoms, and treatments for patients having seizures
Describe the signs, symptoms, and treatments for patients suffering from acute abdominal problems
Describe the signs, symptoms, and treatments for substance abuse patients

BIL: Essential

EDU:	12	AD	AC
	I	P	M,C,S

Competency: **Treat burns**

Competency Builders:
Describe dangers of burns to patient and rescuer
Estimate the degree and size of a burn
Provide emergency care to the burned victim
Manage complications of burns (e.g., respiratory compromise, infection)
Report degree and size of burns, along with any complications and care given
Manage dressing changes, scar management

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage victims of hazardous materials incidents**

Competency Builders:

Describe methods used to identify hazardous material
Describe the threats of hazardous material to victims and the EMT
Describe general principles used to manage a hazardous material victim
Describe methods used to decontaminate or isolate equipment or vehicles used in a hazardous material incident
Identify agencies responsible for handling hazardous material incidents
Describe scene safety

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage special care situations**

Competency Builders:

Provide care for the needs of geriatric, mentally/physically challenged, non-English speaking, and psychologically disturbed patients
Manage behavioral emergencies including disruptive patients
Manage sexual assault victims
Provide care for the terminally ill
Manage SIDS incidents
Describe aspects of scene safety

BIL: Essential

EDU:	12	AD	AC
		P	

Competency: **Demonstrate extrication**

Competency Builders:

Describe common extrication tools, equipment, and safe handling

Demonstrate methods used to gain access to and extricate patient from entrapment, including a motor vehicle

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Describe mass casualty incidents**

Competency Builders:

Define a mass casualty incident (MCI)
Describe the principles involved in management of an MCI
Explain the principle of triage
Describe treatment rationale for MCI

BIL: Essential

EDU:	12	AD	AC
		P	

Competency: **Demonstrate knowledge of systems operation**

Competency Builders:

Identify regulations and recommendations related to driving an emergency vehicle
Describe emergency vehicle and equipment maintenance
Describe the non-medical role of the EMT in situations such as traffic accidents and crime scenes

Unit: Emergency Medical Services

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Demonstrate knowledge of the paramedic profession**

Competency Builders:

Define the roles and responsibilities of the paramedic
Differentiate among the various levels of training—from EMT to paramedic
List current state requirements for paramedic certification and recertification
Define continuing education, certification, licensure, and registration
Explain the purposes of a national association, national registry, and professional journals
Describe the benefits of paramedics teaching in their community

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Describe emergency medical services (EMS) systems**

Competency Builders:

Define medical control and physician responsibility
Explain pre-hospital stabilization of patients
Differentiate between management of trauma and medical patients
Describe protocols and their development
Explain the relationship between prehospital care and total patient care, including the emergency department and hospital specialty departments
Describe the continuum of patient care and the responsibilities of the paramedic within the transfer of patient responsibility
Describe the response of the EMS system, including system access, dispatcher responsibilities, patient evaluation, medical command, and patient responsibility
Identify groups such as ASTM, NCSEMSTC, ACS, AMAJRC, and USDOT and their roles in the promulgation of national standards
Outline the various paramedic-physician relationships
Describe retrospective evaluation of patient care including report review, continuing education, skill practice, and skill deterioration
Describe the EMT-Paramedic's initial responsibilities when arriving on the scene
Identify circumstances that require the EMT- Paramedic's to report incidents to law enforcement or other appropriate authorities

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Demonstrate EMS communication systems**

Competency Builders:

Describe the phases of communication necessary for an EMS event
Define essential communication terms and equipment
Describe the advantages and disadvantages of various EMS communication systems
Describe factors affecting interference, range, and clarity of base, vehicle, and portable radio communications
Describe the functions and responsibilities of the FCC
Describe the functions and responsibilities of the EMS dispatcher
Describe methods of verbal communication of patient information to hospital and to the physician
Explain the importance of written medical protocols and the written EMS run report
Demonstrate proper use of portable and mobile transmitter/receivers in a patient situation
Explain uses of biotelemetry equipment
Complete a written EMS report
Describe medical legal issues concerning patient information

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Demonstrate rescue techniques and extrication**

Competency Builders:

Identify possible hazards of a rescue scene
Describe procedures for handling hazards at a rescue scene
Describe the equipment and techniques to use to gain access to, package, extricate, and transport patients trapped within a vehicle or other confinement
Describe the integration of patient care into the process of patient disentanglement and rescue
Identify proper response in the presence of hazardous materials
Name proper authorities to notify in the case of hazardous materials
Manage scene and safe patient access
Explain removal and transport of the patient from the scene
Demonstrate procedures and operation of equipment used to gain access to, package, extricate, and transport patients trapped or confined in a vehicle or other type of entrapment
Demonstrate techniques for lifting and handling patients with and without spine injuries and/or other special injury problems utilizing the special equipment found on a rescue vehicle
Demonstrate techniques for lifting and moving patients utilizing typical patient handling/carrying devices

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Describe major incident response**

Competency Builders:

Define mass casualty incident (MCI) and when it should be declared
Describe the preplanning phase and response planning for MCI
Describe MCI communications
Describe the components of special resources
Describe the function of scene command, scene triage, and the transferring command function
Describe scene and staging management and a system for patient identification
Define scene safety

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Demonstrate knowledge of patient assessment and initial management**

Competency Builders:

Describe the primary and secondary survey

Describe the anatomy, physiology and pathophysiology of the airway and lungs and its anatomical structures

Describe the use of adjuncts in airway management

Describe advanced methods of airway management

Explain the significance of protection of the cervical spine in airway management

Explain pulmonary ventilation and gas exchange across the alveolar-capillary membrane

Describe the pathophysiology of open and closed pulmonary injuries

Describe the techniques for evaluating effectiveness of ventilation

Describe the anatomy and physiology of the heart and cardiovascular system

Describe the pathophysiology of cardiac arrest

Describe the mechanisms of evaluating the effectiveness of perfusion

Describe hemorrhage control and its benefits and complications

Assess neurological status

Explain the pathophysiology of shock

Define trauma score and its usefulness

Obtain a relevant patient medical history

Describe how a patient is packaged and stabilized for transportation to the hospital

Describe procedures for hospital selection, transportation, and patient monitoring enroute to the hospital

Perform a rapid assessment

Set priorities of care based on threat to life

Perform a secondary survey

Document general patient findings and treatment

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage airway and ventilation**

Competency Builders:

Demonstrate methods of airway management on adult, child, and infant manikins both manually and with adjunctive equipment

Demonstrate methods for assessing continued adequacy of airway management and ventilation when using advanced airway devices

Demonstrate use of portable and fixed suction devices for oropharyngeal and tracheal suctioning

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage shock**

Competency Builders:

Describe the causes, pathophysiology signs, symptoms, clinical manifestations, and management of shock
Describe fluids, fluid transport, and fluid and electrolyte imbalances
Describe resuscitation of the shock patient
Describe hemodynamics of the cardiovascular system
Describe differences in IV fluid composition and their implications in fluid administration
Describe baroreceptors and their affect on blood pressure and perfusion
Describe compensated and uncompensated shock
Describe evaluation of patient's perfusion status
Define acid-base balance
Describe indications and contraindications of the pneumatic anti-shock garment
Describe methods of fluid replacement and the advantages and disadvantages of each
Demonstrate the steps in shock resuscitation
Demonstrate use of pneumatic anti-shock garment
Demonstrate proper technique for setting up intravenous fluids for administration
Demonstrate proper technique of peripheral and external jugular venous cannulation on the adult, child, and infant patient
Demonstrate proper techniques for troubleshooting an intravenous infusion
Calculate fluid administration rates for intravenous fluids utilizing a variety of administration sets
Demonstrate aseptic IV techniques

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Demonstrate knowledge of pharmacology**

Competency Builders:

Identify the various origins and forms of drugs
Differentiate many various names of a drug (e.g., generic, trade, official, chemical)
Identify agencies responsible for regulating drugs and the rationale for regulation
Demonstrate use of the Physician's Desk Reference (PDR)
Identify local and systemic effects of drugs
List effects of various factors on the action of drugs
Describe methods of drug absorption
Define relevant pharmacology terms
Describe the apothecary and metric systems
Convert between and within the apothecary and metric systems
Describe the routes of administration of various types of drugs
Calculate fractional drug dosages
Identify the advantages and disadvantages of subcutaneous, intramuscular, intravenous, and transtracheal injections
Demonstrate the proper procedure for intramuscular, subcutaneous, intravenous piggyback, intravenous bolus, and transtracheal medication administration
Demonstrate the proper procedure for withdrawing medication from a glass vial and a glass ampule

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Handle trauma emergencies**

Competency Builders:

Describe the general care and transportation of the trauma patient
Describe the priorities of trauma care and triage with multiple patients
Describe the anatomy, physiology, pathophysiology, assessment, and management of trauma to all regions of the human body
Describe methods of hemorrhage control
Demonstrate methods of hemorrhage control
Describe neurological examination, assessment, pathophysiology, and management
Describe rapid on-scene management of the trauma patient
Describe the components of a complete prehospital history and the significance of each
Describe various types of splints used for immobilization of fractures and dislocations and their advantages and disadvantages
Describe the short and long backboard, the various state-of-the-art substitutes available, and their specific uses
Describe various systems designed for scoring the severity of injuries to the trauma patient
Describe the use of a trauma score in quantifying patient condition
Demonstrate advanced methods of airway management and ventilation in the trauma patient
Demonstrate decompression of a tension pneumothorax
Demonstrate application of pneumatic anti-shock garment (MAST)
Demonstrate physical examination of the trauma patient
Demonstrate a neurological examination as performed on a trauma patient
Demonstrate immobilization of the cervical spine
Demonstrate splinting techniques
Define indications of a tension pneumothorax

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage burn injuries**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, and assessment of the integumentary system

Describe the movement of body fluids between plasma, interstitial compartments and intracellular compartments

Describe the assessment and management of the burn system

Describe the pathophysiology and treatment of burn shock

Describe the major causes, classifications, and categories of burns

Describe the method of calculating percentages of body surface area burned and various formulas for calculating fluid resuscitation

Assess an inhalation injury

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Handle respiratory emergencies**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, and assessment of the respiratory system
Define appropriate medical terms
Identify the normal partial pressures of oxygen and carbon dioxide in the alveoli, arterial and venous blood, and factors that affect those levels
Describe the normal and COPD respiratory drives
Identify the pharmacology, actions, indications, precautions, dosages, contraindications, and side effects of typical respiratory drugs for the adult and pediatric patient
Demonstrate methods of respiratory drug administration
Describe the signs, symptoms, and pathophysiology of conditions affecting the respiratory system
Demonstrate inspection, auscultation, and palpation of the thorax
Identify normal and abnormal lung sounds
Obtain a history from a patient with respiratory complaints
Assess a patient with respiratory problems

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage cardiovascular emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology relevant to cardiovascular disease and emergencies

Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of common emergency cardiovascular drugs

Identify complications of intracardiac injections

Describe innervation of the heart, sympathetic, and parasympathetic stimulation, blockade, an effects on the heart rate

Describe myocardial electrical physiology

Describe signs, symptoms, and common chief complaints of patients with cardiac conditions

Describe the historical information, specific observations, and physical findings to be evaluated in the cardiac patient

Identify actions, uses, and side effects of common prescription drugs relative to cardiac problems

Describe the etiology of cardiac arrest in adults and pediatric patients

Describe concepts of ECG monitoring, types and causes of artifacts, and rhythm analysis format

Identify the wave forms, intervals, and normal values relative to an electrocardiogram (ECG)

Describe the 12-lead ECG as compared to continuous monitoring

Describe the etiology, clinical significance, and ECG characteristics of cardiac dysrhythmias

Describe the indications for use of a precordial thump, vagotonic maneuvers, synchronized cardioversion, and defibrillation

List energy recommendations for adult and pediatric patients

Identify wave forms, artifacts, and dysrhythmias on Lead or MCL1 rhythm strips and oscilloscope

Obtain history from patient with cardiac condition

Assess dysrhythmias or cardiac condition

Demonstrate application of ECG electrodes
Obtain a sample Lead II or MCL1 rhythm strip
Use defibrillator paddles for Lead II monitoring
Troubleshoot a poor ECG rhythm
Perform a precoridal thump, vagotonic maneuvers, synchronized cardioversion, defibrillation, and external cardiac pacing
Use a mechanical CPR device
Explain a team approach when managing cardiac arrest

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage endocrine emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the endocrine system
Describe the assessment and management of endocrine emergencies
Identify the historical information, observations, and physical findings significant in the patient with endocrine disorders
Identify common prescription drugs that endocrine patients might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Obtain a history from a patient with endocrine problems
Assess patients with endocrine problems
Administer relevant drugs

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage neurological emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the neurological system
Describe the assessment and management of neurological disorders
Identify the actions, uses, and side effects of common prescription drugs relative to neurological problems
Identify common prescription drugs that a patient with neurological problems might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Explain the Glasgow Coma Scale
Use the Glasgow Coma Scale
Differentiate various types of seizures and their phases
Obtain history from a patient with neurological disorders
Assess patients with neurological disorders

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage digestive, genitourinary, and reproductive emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the digestive, genitourinary, and reproductive systems

Identify the historical information, observations, and physical findings significant in the patient with digestive, genitourinary, and reproductive disorders

Describe the assessment and management of digestive, genitourinary, and reproductive system disorders

Identify common prescription drugs that a patient with digestive, genitourinary, and reproductive problems might take and the implications of each

Describe the basic principles, types, and complications of dialysis

Explain the assessment and management of the dialysis patient, including vascular access

Obtain history from a patient with digestive, genitourinary, and reproductive disorders

Identify the pharmacology, actions, indications, precautions, methods, of administrations, dosages, contraindications, and side effects of relevant drugs

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Manage anaphylaxis emergencies**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, causes, signs and symptoms, assessment, and management of anaphylaxis

Identify the historical information, observations, and physical findings significant in the patient with potential anaphylaxis

Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects for the adult and pediatric patient for epinephrine, diphenhydramine, aminophylline, and dexamethasone

Obtain history from a patient with potential anaphylaxis

Administer epinephrine, diphenhydramine, aminophylline, and dexamethasone to the adult and pediatric patient

BIL: Essential

EDU:	12	AD	AC
		P	C,S,M

Competency: **Manage toxicology, alcoholism, and drug abuse emergencies**

Competency Builders:

Describe toxicologic emergencies

Identify the routes of entry of toxic substances into the body

Describe the role of Poison Control Centers in the EMS system and in the management of patients with toxicological emergencies

Define drug abuse terms

Identify commonly abused drugs and their effects

Describe the anatomy, physiology, pathophysiology, assessment, and management of patients with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism

Describe the incidence of alcoholism, drug abuse, and substance abuse in the United States

Obtain history from a patient with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism

Apply a constricting band

Administer relevant drugs

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage infectious diseases**

Competency Builders:

Define terms and conditions relative to infectious diseases

Describe the anatomy, physiology, pathophysiology, causes, mode of transmission, incubation period, assessment, and management of typical infectious and communicable diseases and parasites

Identify the historical information, observations, and physical findings significant in the patient with infectious/communicable disease or parasites

Practice universal precautions according to CDC standards

Describe procedures for reporting and follow-up after exposure to a communicable disease according to CDC standards

Obtain history from a patient with infectious/communicable disease or parasites

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Manage radiation injuries**

Competency Builders:

Identify common types and sources of ionizing radiation

Identify sources of normal background radiation

Describe the anatomy, physiology, pathophysiology, signs and symptoms, causes, assessment, and management of acute and/or chronic exposure to ionizing radiation

Identify the historical information, observations, and physical findings significant in the patient with acute and/or chronic exposure to ionizing radiation

Describe safety procedures for allied health personnel and patients related to exposure to ionizing radiation

Explain procedures for notifying appropriate health officials of radiological incidents

Obtain history from a patient with acute and/or chronic exposure to ionizing radiation

Manage patient with acute and/or chronic exposure to ionizing radiation

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage geriatric emergencies**

Competency Builders:

Identify the physical, social, and psychological differences between youth and elderly
Identify the historical information, observations, and physical findings significant in the geriatric patient with acute and/or chronic medical problems
Identify illness/complaints that require special consideration in the elderly
Describe the anatomy, physiology, pathophysiology, assessment, and management of common geriatric illnesses
Obtain a history from a geriatric patient
Treat geriatric patients
Describe geriatric abuse
Describe the components and objectives of a gerontology program
Demonstrate communication techniques with a special needs patient (e.g., blind, deaf, dementia)

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Manage pediatric emergencies**

Competency Builders:

Identify the general goals of managing the pediatric patient

Identify the historical information and its sources in evaluating the pediatric patient

Describe, by age groups, the relevant aspects of normal growth and development, personality development, relationship to parents, history factors, common illnesses, and accidents

Describe Sudden Infant Death Syndrome (SIDS), the current theories for causes, assessment, management, and the immediate needs of the family

Describe the characteristics of a child abuser

Describe the characteristics of an abused child

Describe the assessment and management of potentially abused children, including management of the family of the child

Identify types of child abuse

Describe the anatomy, physiology, pathophysiology, assessment, and management of common pediatric disorders

Identify the pediatric dosage for relevant drugs

Demonstrate techniques for airway maintenance in the pediatric patient

Describe techniques and sites for intravenous infusion in the pediatric patient

Obtain a history from a pediatric patient

Assess a pediatric patient

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Manage the gynecologic patient**

Competency Builders:

Describe the anatomy and physiology of the female reproductive system

Identify the historical information, observations, and physical findings to be evaluated for the gynecologic patient

Describe the pathophysiology and management of gynecological disorders

Describe potential causes, assessment, and management of trauma to the external genitalia

Describe the assessment and management of a sexual assault victim

Obtain a history from a patient with a gynecologic problem

Assess a patient with a gynecologic problem

Report sexual assault

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M,S

Competency: **Manage the obstetric patient**

Competency Builders:

Define obstetrical terminology
Describe the process of fetal development and circulation
Identify the historical information, observations, and physical findings to be evaluated for the obstetric patient
Describe early signs and symptoms of pregnancy
Describe potential causes, assessment, and management of trauma to the pregnant mother and the fetus
Describe the effects of pregnancy on pre-existing medical conditions
Describe the anatomy, physiology, pathophysiology, causes, assessment, and management of obstetrics
Describe Braxton-Hicks contractions
Describe the progression of labor
Describe factors that influence transport decisions for the patient in labor
Describe a normal cephalic delivery
Describe the pathophysiology, assessment, and management of delivery complications
Identify the pharmacology, actions, indications, methods of administration, dosages, contraindications, and side effects of oxytocin
Obtain a history for an obstetric patient
Define stages of labor and associated complications
Assess the obstetric patient
Treat obstetrical patients, including assisting with childbirth
Administer oxytocin

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S,M

Competency: **Manage the neonate**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, assessment, and routine management of the neonate
Describe the mechanisms, effects, and treatment of hypothermia in the neonate
Define the parameters, numerical values utilized, and the procedure for Apgar scoring
Demonstrate stimulation of CPR for the neonate
Identify observations and physical findings to be evaluated in the neonate
Identify problems and equipment requirements for transportation of the neonate
Obtain a history for a neonate
Assess a neonate
Administer oxygen to a neonate
Suction a neonate using suction and bulb syringe
Calculate Apgar score
Obtain an antepartum and postpartum history of the mother

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Manage behavioral emergencies**

Competency Builders:

Define behavioral emergency

Identify factors that may alter the emotional status of the ill or injured

Identify common prescription drugs that a patient with behavioral disorders might take and the implications of each

State reasons for and methods of reassuring patient who is experiencing an emotional crisis

Describe verbal communication techniques useful in managing the emotionally disturbed patient

Describe means to insure the safety of the Paramedic

Describe circumstances when bystanders and relatives should be removed from the scene

Identify factors which increase the risk of suicide and behaviors that are indicators of an impending suicide attempt

Describe techniques that facilitate the systematic gathering and reporting of information about the disturbed patient

Describe techniques that are useful in managing the effects of crisis situations on the Paramedic

Describe techniques that are useful in redirecting anxiety in relatives and bystanders

Identify appropriate action of the Paramedic when confronted with an uncontrollable, armed patient

Describe situations in which the EMT-Paramedic may forcibly restrain or transport a patient

Demonstrate techniques for restraining the violent patient

Demonstrate techniques useful in protecting the EMT-Paramedic when attached by a violent patient

Obtain a history of patients with behavioral emergencies

Assess patients with behavioral emergencies

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Demonstrate paramedic skills**

Competency Builders:

Demonstrate patient assessment/management (e.g., medical and trauma)
Demonstrate ventilatory management skills/knowledge (e.g., simple adjuncts, supplemental oxygen delivery, endotracheal intubation, chest decompression, transtrachael jet ventilation/crcothyrotomy)
Demonstrate management of cardiac arrest patient (e.g., therapeutic modalities, megacode, monitor/defibrillator knowledge, pacing)
Demonstrate hemorrhage control
Demonstrate splinting procedures
Demonstrate IV therapy and IO therapy (e.g., set-up, fluid therapy, medication administration)
Demonstrate spinal immobilization (e.g., seated and lying patients)
Demonstrate gynecologic skills and knowledge
Demonstrate other related skills (e.g., radio communications, report writing, documentation)

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Maintain current certifications and continuing education**

Competency Builders:

Meet AHA/ARC standards for CPR proficiency

Meet AHA standards for advanced cardiac life-support proficiency

Meet national registry and state requirements for continuing education (e.g., paramedic refresher, additional continuing education)

BIL: Essential

EDU:	12	AD	AC
	I	P	C,S

Competency: **Assist with emergency childbirth**

Competency Builders:

Describe the anatomy and physiology relevant to childbirth
Assist mother before, during, and after delivery
Describe potential complications during three stages of childbirth
Manage complications of delivery during three stages of childbirth
Care for neonate
Resuscitate newborn if necessary
Provide appropriate care for premature infant
Provide care for multiple births
Document data relevant to delivery and care given

Unit: Oral Anatomy and Pathology I

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Identify dento-osseous structures**

Competency Builders:
Identify functions of dento-osseous structures
Identify bones and sutures of the skull
Identify cranial landmarks
Identify TMJ structure and ligaments

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Identify facial muscles**

Competency Builders:
Explain formation of facial expression
Explain function of mastication
Identify origin and insertion of suprehyoid muscles
Explain function of tongue and hyoid structure
Identify muscles of tongue

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Explain neurology of head and neck**

Competency Builders:
Define reflex arc
Describe function of cranial nerves
Define trigeminal nerve
Differentiate perception of and reaction to various types of pain

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe vascular system of the head**

Competency Builders:

Identify functions of blood

Identify major arteries and branches (e.g., external carotid, internal and external maxillary)

Identify purpose and location of viscera of head and neck

Unit: Oral Anatomy and Pathology II

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe developmental abnormalities**

Competency Builders:

Differentiate normal and abnormal jaws
Differentiate normal and abnormal lips
Differentiate normal and abnormal mucosa
Differentiate normal and abnormal tongue
Differentiate normal and abnormal salivary glands
Differentiate normal and abnormal teeth (e.g., size, shape, number, structure, eruption)

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe dental caries**

Competency Builders:
Identify etiology of caries
Describe affects of saliva
Identify types and clinical features of caries
Describe histopathology of the caries process
Explain use of radiographs in caries detection

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe pulpal and periapical disease**

Competency Builders:
Identify etiology of pulpal disorders
Describe periapical infections and diseases of the supporting bone

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe tissue changes in response to physical or chemical injury in the oral cavity**

Competency Builders:

Describe effects of placement of restorations on the pulp
Describe bruxism
Classify fractures of the teeth
Describe ankylosis
Describe traumatic bone cyst
Compare sialolithiasis and mucous retention
Identify consequences associated with wearing removable dental appliances
Describe effects of drugs and heavy metals on structures in oral cavity
Identify iatrogenic factors

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe neoplasms of oral cavity**

Competency Builders:

Define benign and malignant

Describe fibroma, papilloma, hemangioman, tori, adenoma, and premalignant lesions (red and white)

Describe squamous cell carcinoma, adenocarcinoma, osteosarcoma, and metastatic neoplasms

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Describe odontogenic cysts and neoplasms**

Competency Builders:

Define cysts and neoplasms

Describe dental lamina cysts, laterial periodontal, follicular, periapical, calcifying, and keratocyst

Describe ameloblastoma, amelobastic fibroma, and odontoma

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe treatment of patients with special needs**

Competency Builders:
Describe treatment of gerodontic patients
Describe treatment of edentulous patients
Describe treatment of pediatric patients
Describe treatment of medically compromised patients

Unit: Chairside Procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Perform patient assessment**

Competency Builders:

Correlate medical/dental history with a dental hygiene treatment plan and services to be performed
Identify contraindications to dental treatment in a medical and dental history
Recognize remedial actions or referrals
Correlate extraoral and intraoral examination/findings with a dental hygiene treatment plan and patient services to be performed
Conduct a complete periodontal examination, including probing, radiographic interpretation, mobility assessment, and tissue description
Consult with dentists and physicians to verify dental and medical information
Develop treatment plan to be implemented
Record existing restorations, conditions, and pathologies
Assess patient's nutritional status
Perform soft tissue reassessment
Evaluate the effects of initial dental hygiene therapy
Define oral manifestations and their relations to systemic diseases

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Prepare patient**

Competency Builders:

Secure patient's chart
Prepare operatory
Greet patient
Review patient's health history
Position patient for examination or treatment
Drape patient
Adjust chair and lights
Position operator and assistant stools

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics

Identify common causes of back injuries

Demonstrate proper operator and patient body mechanics involved in transfer and positioning of patient

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Maintain dental operatory**

Competency Builders:
Follow manufacturer's instructions
Prepare disinfectant solutions
Open operatory
Disinfect operatory and sterilize equipment
Dispose of used materials in compliance with OSHA and EPA
Close operatory

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Provide evacuation and retraction in compliance with OSHA, EPA, and ODPA**

Competency Builders:
Practice infection control procedures
Interact with patient
Operate and control high-volume evacuator and low-volume evacuator
Retract tissue
Operate air-water syringe
Perform equipment maintenance and disinfection

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Identify dental instruments**

Competency Builders:

Identify grasp and exchange types of instruments
Describe the operation zone of grasp and exchange instruments
Identify rotary handpieces and cutting instruments
Describe the operation zone of rotary handpieces and cutting instruments
Demonstrate care and maintenance of dental instruments

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Transfer instruments**

Competency Builders:
Follow dentist's directions
Anticipate procedural steps
Use transfer zone
Deliver instruments
Receive instruments
Maintain sequentially organized tray

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Explain instrumentation**

Competency Builders:
Identify parts, components, and types of instrumentation
Identify sequence of instrumentation

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Use instruments**

Competency Builders:
Use grasp
Use fulcrum
Differentiate use of adaption from angulation
Use lateral pressure
Differentiate visibility from accessibility

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Sharpen instruments**

Competency Builders:
Use stationary equipment
Use stationary stone
Use supplemental methods
Care for sharpening stone

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with preliminary examination**

Competency Builders:
Practice infection control procedures
Prepare basic tray setup
Measure and record vital signs
Record and update patient health history
Interact with patient
Prepare setup for preliminary impression
Take preliminary impression
Record oral condition on patient's chart
Chart patient's teeth
Assist with oral cancer screening

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with administering anesthetic**

Competency Builders:

Practice infection control procedures
Read and follow manufacturer's instructions
Prepare anesthetic tray setup
Interact with patient
Apply topical anesthetic
Assist with administration of local anesthetic
Monitor patient's respiration rate and behavior
Rinse patient's mouth
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with application of rubber dam**

Competency Builders:
Practice infection control procedures
Prepare tray for rubber dam application and removal
Explain procedure to patient
Assist with installation of rubber dam according to ODPA
Remove rubber dam
Demonstrate application and removal of rubber dam

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with anterior restoration and aesthetic dental procedures**

Competency Builders:
Interact with patient
Practice infection control procedures
Read and follow manufacturer's instructions
Prepare setup for rubber dam application and removal
Assist during cavity/tooth preparation
Assist with shade and materials selection
Prepare setup for cavity liners and/or acid etch and bonding procedures
Assist with acid etch and bonding procedures
Assist with placement of materials
Assist with finishing and polishing of restoration
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with in-office bleaching procedures**

Competency Builders:

Interact with patient
Record present shade of teeth
Practice infection control procedures
Assist with product selection
Read and follow manufacturer's instructions
Prepare setup for rubber dam application and removal
Assist with solution application
Monitor bleaching process
Prepare setup and assist with topical fluoride treatment
Instruct patient in postoperative care
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with home-bleaching procedure**

Competency Builders:
Interact with patient
Record present shade of teeth
Practice infection control procedure
Assist with product selection
Read and follow manufacturer's instructions
Prepare setup and assist with impression
Pour and trim model
Fabricate and trim tray
Instruct patient in home use according to dentist's orders
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with posterior restoration**

Competency Builders:
Interact with patient
Practice infection control procedures
Read and follow manufacturer's instructions
Assist during cavity preparation
Prepare setup for rubber dam application and removal
Prepare setup for cavity liners
Prepare setup for amalgam filling procedure
Prepare setup for composite filling procedure
Prepare for cavity filling
Assist with placement of materials
Assist with carving amalgam
Provide postoperative instructions
Prepare setup for finishing and polishing amalgam restoration
Prepare setup for finishing and polishing composite restoration
Assist with finishing and polishing restoration
Record treatment on patient's chart

Unit: Extraoral and Intraoral Examinations

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Explain examination procedures**

Competency Builders:

Identify components of examination
Identify sequence of examination procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Apply techniques of inspection**

Competency Builders:

Use materials and instruments
Describe observations during inspection
Use dental charting symbols
Perform oral cancer screening

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe periodontium**

Competency Builders:

Identify gingiva and related structures
Describe significance of color, size, and contour
Describe surface texture and consistency

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Examine teeth**

Competency Builders:
Explain enamel hypoplasia
Differentiate among attrition, erosion, and abrasion
Identify carious lesions
Classify carious lesions
Identify fractures of teeth
Classify occlusion
Differentiate between functional occlusion and trauma from occlusion
Chart periodontal records

Unit: Preventive Oral Hygiene Procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe plaque and soft deposits**

Competency Builders:

Define plaque and related terminology

Describe the relationship of plaque cycle to dental disease (e.g., dental caries, periodontal infections)

Explain how diet affects plaque and soft deposits

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe dental calculus and stains**

Competency Builders:
Explain calculus formation
Differentiate supragingival from subgingival calculus
Identify stains of teeth (e.g., exogenous, endogenous intrinsic, exogenous intrinsic)

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe scaling and root planing**

Competency Builders:
Describe exploratory stroke
Describe coincidental curettage
Describe post treatment procedures

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Remove plaque and stains from teeth**

Competency Builders:
Identify disclosing agents
Explain effects and indications of disclosing agents
Apply selective polishing
Use porte polisher
Use abrasive for polishing (e.g., prophyjet)
Clean removable denture

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Remove hard deposits**

Competency Builders:

Assess amount and location of deposits
Select instrumentation choice (e.g., ultrasonic, handscalers)
Demonstrate removal of hard deposits
Describe patient reassessment

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Describe oral disease control**

Competency Builders:

Describe advantages and disadvantages of toothbrushes
Describe toothbrush procedures (e.g., bass method, rolling stroke, modified stillman, charters)
Describe supplemental brushing methods
Identify contraindications for toothbrushing
Explain care of toothbrushes
Explain interdental plaque control
Identify types and uses of dental floss
Explain oral irrigation
Explain chemical plaque removal
Describe dentifrices
Explain use of mouthrinses
Describe additional supplemental aids (e.g., proxabrush)

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Apply fluorides**

Competency Builders:

Explain fluoridation
Identify fluoride in foods
Identify dietary fluoride supplements
Explain purpose and use of topical fluoride
Follow safety precautions for using fluoride
Use sodium fluoride
Use acidulated phosphate-fluoride (APF)
Use stannous fluoride

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Use desensitizing agents**

Competency Builders:
Explain action of desensitizing agents
Demonstrate methods of desensitization

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with pit and fissure sealants**

Competency Builders:

Interpret and follow manufacturer's instructions for sealants
Prepare setup for pit and fissure sealant
Interact with patient
Prepare sealant preparation
Prepare sealant placement
Record treatment on patient's chart

Unit: Dental Morphology

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain dental physiology**

Competency Builders:

Describe surfaces and ridges
Identify tooth/oral landmarks
Explain division into thirds
Identify proximal contact areas
Identify interproximal contact areas and spaces
Differentiate between embrasures and escapements
Describe protective contours
Describe cervical curvatures

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain arrangement of teeth and occlusion**

Competency Builders:

Explain dental arch formation
Describe compensating curves of the dental arches
Describe contact relations of the teeth
Describe occlusal contact and intercuspid relations

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Describe deciduous teeth**

Competency Builders:
Differentiate incisors and canines
Identify molars
Explain occlusion

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Describe permanent teeth**

Competency Builders:

Describe anterior arrangement (e.g., central and lateral incisors, canines)

Describe posterior arrangement (e.g., first and second premolars; first, second, and third molars)

Unit: Dental Radiography

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Identify characteristics of radiation**

Competency Builders:

Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Compare different methods of measuring x-radiation

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Explain how x-rays are produced**

Competency Builders:

Identify the different parts of the x-ray tube
Describe the process for production of radiation
Differentiate among the different types of radiation produced
Describe radiographic density—contrast and detail
Explain the Inverse Square Law and its effect on x-ray production

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Describe effects of radiation on the human body**

Competency Builders:

Explain somatic and genetic effects of x-rays
Identify tissues most and least sensitive to radiation
Differentiate among exposure variables and their effects, both acute and chronic
Describe methods for reducing patient exposure
Explain methods of operator protection
Identify common methods of personnel monitoring

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Identify structures through the use of radiographs**

Competency Builders:
Differentiate between radiopaque and radiolucent structures
Differentiate among different tooth structures
Identify the bone and surrounding structures in the oral cavity
Identify the different restorative materials used in the mouth
Identify different abnormalities that may develop in the oral cavity

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Apply knowledge of the process for developing radiographs**

Competency Builders:

Identify features of a darkroom and necessary equipment
Identify components and chemicals in dental film
Describe how film should be stored
Identify steps for proper film processing
Describe cleanup procedures
List common darkroom errors and methods to prevent them
Identify errors on radiographs
Operate automatic film processors
Duplicate radiographs

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Maintain unexposed film**

Competency Builders:

Check expiration date
Store film

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Identify anatomic landmarks**

Competency Builders:
Locate teeth on radiograph
Locate supporting structures on radiograph
Locate canals on radiograph
Locate foramina on radiograph
Locate sinuses on radiograph
Differentiate normal and abnormal structures

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Describe errors in dental radiographic technique**

Competency Builders:
Identify types of possible errors
Explain foreshortening
Explain elongation
Explain cone cutting
Explain improper film placement
Explain distortion
Explain creased film
Explain film fog
Explain overexposed and underexposed film
Explain chemical processing errors
Describe characteristics of diagnostically acceptable quality
Explain how errors can be corrected
Demonstrate error analysis

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Expose films**

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Adjust voltage, amperage, and timer on x-ray equipment
Apply infection control procedures
Perform "bisecting-the-angle" technique
Follow radiation safety precautions for patient and operator
Follow exposure guidelines
Position patient
Select film size and speed
Position film
Perform paralleling technique
Expose extraoral radiographs (e.g., panoramic)

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Process radiographs manually**

Competency Builders:

Follow manufacturer's instructions for equipment
Mix solutions for developing and fixing radiographs
Follow darkroom procedures
Handle film properly
Load film in developing tank
Read thermometer
Interpret time and temperature chart
Follow safety precautions to prevent eye injury and minor burns in compliance with OSHA and EPA
Clean and disinfect equipment
Dispose of mixed solutions in accordance with EPA regulations

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Process radiographs automatically**

Competency Builders:

Follow manufacturer's instructions for x-ray equipment and solutions in compliance with OSHA and EPA

Follow darkroom procedures

Handle film properly

Operate automatic processor

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Mount radiographs**

Competency Builders:
Handle film properly
Place radiographs in mount
Label mount
Store mounted radiographs

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Apply bisecting technique to expose a full-mouth survey**

Competency Builders:

Explain basic principles of bisecting technique
Identify common errors in technique
Demonstrate patient positioning
Demonstrate uses of film holders

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Apply paralleling technique to expose a full-mouth survey**

Competency Builders:

Describe principles and methods of paralleling technique
Describe film placement for all exposures
Prepare instruments for use in oral cavity
Demonstrate use of film holders

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Complete full-mouth survey on child DXTTR or patient**

Competency Builders:

Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Complete full-mouth survey on adult DXTTR or patient**

Competency Builders:
Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Complete full-mouth survey on edentulous patient**

Competency Builders:

Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

Unit: Preventive Dental Assisting Procedures

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Assist with prophylaxis**

Competency Builders:
Prepare prophylaxis and examination tray setup
Prepare saliva ejector or high vacuum evacuator (HVE)
Prepare patient
Interact with patient
Remove debris with saliva ejector or HVE
Assist with scaling
Pass and receive instruments
Air-dry oral cavity
Assist with polishing
Pass and receive dental floss
Use correct techniques to aspirate and retract
Rinse patient's mouth
Instruct patient in home-care procedures
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Administer topical fluoride**

Competency Builders:
Set-up for fluoride treatment
Interact with patient
Air-dry oral cavity
Measure liquids and gels
Apply fluoride
Time treatment
Instruct patient in post-fluoride treatment
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	P	R	

Competency: **Instruct patient about oral hygiene and nutrition**

Competency Builders:

Follow manufacturer's instructions on dental products
Prepare tooth brushing and flossing setup
Interact with patient
Demonstrate use of disclosing agents
Demonstrate brushing
Demonstrate flossing
Demonstrate oral hygiene aids
Take plaque index
Examine plaque under microscope
Take a Snyder Test
Incubate Snyder Test
Instruct patient on care of fixed and removal appliances
Instruct patient in recording diet
Analyze dietary report
Instruct patient in proper nutrition
Record treatment on patient's chart

Unit: Dental Specialties

BIL: Recommended

EDU:	12	AD	AC
	I		

Competency: **Assist with oral surgery**

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare patient for oral surgery
Prepare for oral surgery
Assist with anesthesia
Assist with oral surgery
Prepare setup for implant
Assist with implant
Prepare setup for dry socket treatment
Assist with dry socket treatment
Prepare setup for incision and drainage
Assist with incision and drainage
Prepare setup for surgical irrigation
Prepare setup for biopsy
Assist with biopsy
Prepare biopsy for lab
Give postoperative instructions
Prepare setup for suture removal
Assist with suture removal
Record treatment on patient's chart

BIL: Recommended

EDU:	12	AD	AC
	I		

Competency: **Assist with pediatric dentistry**

Competency Builders:
Interact with patient
Prepare pedodontics setup
Practice infection control procedures
Assist with pedodontic examination
Assist with topical fluoride application
Assist with stainless steel crowns
Assist with space maintainers
Prepare pulpectomy setup
Assist with pulpectomy procedures
Assist with pit and fissure sealant placements
Record treatment on patient's chart
Assist with restorative treatment
Assist with patient management (e.g., restraints)

BIL: Recommended

EDU:	12	AD	AC
	I		

Competency: **Assist with endodontics**

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare endodontics setup
Assist with rubber dam placement
Assist with endodontic examination
Assist with opening the pulp cavity, removal of diseased pulp, and root canal enlargement
Measure reamers and files
Expose radiographs
Process radiographs
Assist with sterilizing and drying canal
Assist with placement of medicaments
Assist with root canal filling
Assist with endodontic surgery
Record treatment on patient's chart

BIL: Recommended

EDU:	12	AD	AC
	I		

Competency: **Assist with fixed prosthodontics**

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare patient
Prepare prosthodontics tray setup
Assist with administering local anesthetic
Take preliminary impression
Remove temporary crowns
Assist with gingival retraction
Assist with final impression for crown and bridge
Assist with crown and bridge try-in and shade selection
Assist with bite registration
Assist with fabrication of temporary restorations
Prepare setup for crown and bridge cementation
Assist with placing temporary restorations
Instruct patient in care and maintenance of temporary restorations
Assist with crown and bridge cementation
Prepare setup for equilibration
Assist with equilibration
Instruct patient in postoperative care
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Assist with periodontics**

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare periodontics setup
Assist with periodontic examination
Assist with scaling and sub gingival curettage
Assist with gingivectomy
Set-up for periodontal dressing
Assist with placement of periodontal dressing
Place periodontal dressing
Assist with removal of periodontal dressing
Remove periodontal dressing
Instruct patient in home-care procedures
Record treatment on patient's chart

BIL: Recommended

EDU:	12	AD	AC
	I		

Competency: **Assist with removable prosthodontics**

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare patient
Prepare prosthodontics tray setup
Take preliminary impression
Assist with final impression
Assist with removable prosthodontics
Assist with bite registration and tooth selection
Assist with denture/partial try-in
Assist with denture/partial insertion
Assist with denture/partial adjustment
Assist with partial denture repair
Record treatment on patient's chart

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Assist with public health dentistry**

Competency Builders:

Demonstrate knowledge of assessment, planning, implementation, and evaluation of community health interventions
Analyze research methodologies for community health interventions
Interpret research findings in scientific literature
Apply research findings to dental hygiene care delivery
Apply statistical analysis to health trends and community interventions
Assist dentist in public health clinics, hospitals, schools and nursing homes
Present information on oral health care to school or community group

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Perform direct patient services**

Competency Builders:

Differentiate between deposits and other causes of tooth surface roughness
Check for calculus removal
Scale teeth, removing accretions with hand instruments
Root plane to remove altered cementum
Manipulate mechanical instruments for deposit removal (e.g., ultrasonics, prophy-jet)
Perform soft tissue curettage
Apply desensitizing agents
Clean removable appliances
Direct patient in home therapies to maintain and restore soft tissue health
Provide dietary counseling for health maintenance and specific healing needs
Recommend patient use of caries prevention agents

Unit: Dental Materials I

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Demonstrate knowledge of dental laboratory materials**

Competency Builders:
Identify gypsum materials
Pour models and dies
Describe dental waxes
Indicate uses of dental waxes
Wax-up for metal fabrication
Wax-up for resin processing
Describe impression materials for laboratory use
Explain model duplication media
Identify denture base materials by color and characteristics
Discern similarities and differences of denture base materials
Explain the various metals used in dentistry, the metals used in fixed and removable prostheses
Describe the characteristics and properties of porcelains and ceramic materials
List the various separating agents
List composition of various separating agents
Identify fluxes and antifluxes
Describe the indications and differences of various laboratory alcohols
List the amount of pickling agents
Define wetting agents
Describe the uses of wax solvents
Describe the composition of wax solvents
Identify the variety of abrasives used in finishing appliances
List the polishing agents for resins
List the polishing agents for metals
List the polishing agents for ceramics
List the properties of laboratory gases
List the uses of laboratory gases

List the safe handling of laboratory gases
Describe miscellaneous laboratory materials and agents

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Explain dental laboratory material properties**

Competency Builders:
Differentiate force and strain
Define compressive, tensile, and shearing
Differentiate between elastic limit and modulus of elasticity
Differentiate between malleability and ductility
Differentiate between flow and creep
Describe the Knoop hardness test
Describe the Brinell hardness test
Explain linear coefficient of thermal expansion
Differentiate between adhesion and viscosity

Unit: Dental Materials II

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Demonstrate use of impression materials**

Competency Builders:

Describe the different impression materials
Identify types of material set
Explain mixing ratios of impression materials
Describe the mixing, working and setting times
Identify factors affecting setting time
Describe proper handling of different impression materials

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Use dental cements, liners, and varnishes**

Competency Builders:

Explain the purpose of dental cements, liners, and varnishes
Identify types of dental cements, liners, and varnishes (e.g., zinc phosphate, zinc oxide eugenol, EBA cement, polycarboxylate, glass ionomer)
Differentiate between light cure and self cure liners
Describe the armamentarium for dental cements, liners, and varnishes
Explain material ratios of gypsum products
Describe the mixing and setting time
Identify factors effecting setting time

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Use restorative materials**

Competency Builders:

Explain the purpose of using restorative materials
Identify components of restorative materials use
Describe the armamentarioum for restorative materials use
Explain material ratios of mercury and alloys
Explain the purpose of using ketac silver
Describe the armamentarium for ketac silver use
Demonstrate the application of ketac silver
Explain the purpose of using composites
Identify types of composites
Describe the advantages and disadvantages of composite use
Describe the aramentarium for composite use
Explain material ratios of composite
Describe the mixing and setting time
Describe application methods for composites
Explain acid etching
Identify factors affecting setting time
Identify factors affecting mixing time
Define polymerization
Define monomers
Define polymer
Define curing
Define catalyst
Explain the properties of shade selection and its armamentarium
Explain the bonding types and procedure
Explain the different bonding products

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Demonstrate dental laboratory procedures**

Competency Builders:
Pour models and dies
Explain the purpose of using gypsum products
Identify types of gypsum products
Describe the armamentarium for gypsum product use
Explain material ratios of gypsum products
Describe the mixing and setting time
Define exothermic reaction, calcining, gauging water, and refractory
Explain model trimming
Identify factors affecting setting time
Fabricate impression trays
Assemble materials and equipment
Adapt spacer
Adapt acrylic
Trim finished tray
Fabricate gypsum models
Select gypsum material
Rinse and dry impressions
Apply mathematical ratios
Pour edentulors models
Trim models
Articulate models

Unit: Dental Hygiene

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Explain functions and pathologies of dental-related anatomy**

Competency Builders:

Identify structures and functions of head and neck anatomy including bones, muscles, sinuses, salivary glands, nerves, and vessels
Identify embryonic development of the head, oral cavity, and teeth
Identify teeth and their landmarks
Describe histological components of the head, and oral cavity
Describe elements of the teeth and supporting structures
Describe oral pathological conditions

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Maintain dental instruments and equipment**

Competency Builders:

Identify various types, functions, and operations of dental operatory and laboratory equipment

Identify types and functions of various dental instruments

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Assist with dental office emergency care**

Competency Builders:
Describe dental office emergencies, their prevention and treatment
Assist with medical emergency care, including CPR

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Anesthetic application**

Competency Builders:

Identify drug requirements, agencies, and regulations
Record a drug prescription
Identify drug actions, side effects, indications, and contraindications
Identify common drugs used in dentistry
Apply a topical anesthetic agent
Identify properties of anesthetics
Prepare syringes for the administration of local anesthetics
Monitor nitrous oxide-oxygen conscious sedation

BIL: Essential

EDU:	12	AD	AC
	I	P	

Competency: **Perform preventive dentistry techniques**

Competency Builders:

Identify applicable methods of preventive dentistry and instruct patients on their implementation
Prepare setup for oral prophylaxis and anticariogenic treatments
Identify elements of nutrition, basic food groups, and acceptable diets
Identify deficiencies that manifest symptoms in the oral cavity and describe relevant therapies
Formulate diets to address specific dental needs

Unit: Health Information Processing

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Assemble medical records**

Competency Builders:
Activate a patient's health record
Receive registration information
Update or add information
Assign number to patient or verify number already issued
Activate previous records and sign out to appropriate individual or unit
Assure security of master patient index

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Perform quantitative analysis on patient's health record**

Competency Builders:

Collect health records of discharged or deceased patient
Enter date of discharge or death in appropriate place
Arrange reports in correct order (e.g., laboratory reports placed in record sequence and chronological order)
Review record for correct patient identification on all pages
Review record for presence of all necessary reports

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain health record locator system**

Competency Builders:
Complete requisition information
Perform record search through locator system
Retrieve and sign out record
Print computer record
Copy record from storage system
Update health record locator system
Forward record to appropriate location

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Abstract information from a health record**

Competency Builders:

Use computerized abstracting system
Perform abstract according to Uniform Hospital Discharge Data Set (UHDDS) guidelines
Verify information on abstract with health record
Document on health record that abstract has been completed
Forward abstracted information to appropriate area

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Prepare health record for court of deposition**

Competency Builders:

Verify authenticity of court order
Verify authenticity of subpoena
Verify treatment of patient
Analyze record for completeness
Notify appropriate person if the case may involve the facility, an employee of the facility, or a member of the medical staff
Remove correspondence or other reports not part of the health record
Follow department procedures for preparation of record
Photocopy record
Obtain notarization for certification statement as needed
Notify appropriate persons as to the date of appearance
Record date of appearance in subpoena log
File legal document in a secure setting outside of original health record
Retain legal document on file in accordance with department policies/procedures

Unit: Health Information Maintenance

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Trace lost record**

Competency Builders:

Receive request for record
Examine sign-out log
Use computer locator system
Check area where record is supposed to be located
Search other departmental areas (e.g., transcription area, correspondence area, coding/abstracting area, microfilm area)
Forward found record to requester
Recompile medical records from available ancillary departments, physicians offices, and/or any other resources
Follow procedures for lost record

BIL: Essential

EDU:	12	AD	AC
		P	C,S

Competency: **Maintain a tumor registry**

Competency Builders:
Obtain health record of tumor patient
Record information into accession registry
Identify severity indicators
Initiate patient information into tumor registry master patient index
Update patient information into tumor registry master patient index
Complete tumor registry abstract form from Department of Health
Record information of a deceased patient into registry
Follow guidelines set forth by American College of Surgeons

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Code diagnoses and procedures using the current modification of the International Classification of Diseases (ICD-9-CM)**

Competency Builders:

Review entire record for diagnosis to be coded (e.g., physician progress notes, operational reports, labs, medical sheets, pathology reports, etc. for optimal reimbursement)
Select diagnosis according to specific guidelines (e.g., HCFA)
Use coding manual/encoder
Identify diagnosis code number(s)
Select procedures according to specific guidelines (e.g., HCFA)
Check code numbers for accuracy
Check code number for sequencing
Define concurrent coding
Contact physician for further clarification when needed

BIL: Essential

EDU:	12	AD	AC
		P	S

Competency: **Assign Major Diagnostic Classification (MDC) and Diagnostic Related Groups (DRGs)**

Competency Builders:
Receive ICD-9-CM coded record
Verify proper sequencing of diagnoses
Verify proper sequencing of procedures
Notify physician regarding questions of possible sequencing changes
Verify proper code numbers for diagnoses
Verify proper code numbers for procedures
Assign severity of illness categories
Validate DRG assignment
Validate output on UB 92 or other billing forms
Use computerized grouper to assign DRG's
Assign appropriate Major Diagnostic Classification
Assign appropriate Diagnostic Related Group within the MDC
Define DRGs

BIL: Essential

EDU:	12	AD	AC
	I	P	S

Competency: **Code diagnoses and procedures using Current Procedural Terminology (CPT-4) methodology**

Competency Builders:

Review outpatient record for diagnoses to be coded
Review outpatient record for procedures to be coded
Select the most appropriate diagnostic test(s) or procedure(s) which correlates to the CPT-4 coding guidelines
Contact physician for further clarification if record documentation doesn't permit exact coding
Check CPT-4 coding number for accuracy
Check CPT-4 coding number for sequencing
Define ASC (Ambulatory Surgery Center) payment groups
Define APGs (Ambulatory Patient Groups)
Define RBRVS (Reimbursement Based Relative Value System)

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain computer files**

Competency Builders:
Store material
Create backup files
Store documents on disks
Define optical disc storage
Update computer files

Unit: Health Information Clerical Functions

BIL: Essential

EDU:	12	AD	AC
	P	R	C

Competency: **Compose electronic correspondence**

Competency Builders:

Identify need to compose correspondence
Use specified format
Compose draft of correspondence
Revise draft of correspondence
Edit for grammar, spelling, punctuation, and sentence structure
Prepare final copy of correspondence
Proofread final copy
Submit correspondence to appropriate person

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Transcribe recorded dictation**

Competency Builders:
Receive dictated material
Select materials to be transcribed in order of priority
Listen to recorded dictation
Transcribe materials in specified format according to departmental policies and procedures
Edit transcribed materials for accuracy and completeness
Record required transcription data on form (e.g., reference initials, date dictated, date transcribed)
Record completion of dictated material in control log
Forward completed dictated material to appropriate area
Receive dictated material
Select materials to be transcribed in order of priority

BIL: Essential

EDU:	12	AD	AC
	I	P	M,C

Competency: **Input data on computer**

Competency Builders:
Input data into spreadsheet format
Input data into graphs and charts
Input data into source documents
Input data into database files
Input data with optical character recognition equipment
Input data with voice activated equipment
Input data using peripheral equipment available (e.g., mouse, touch screen, graphics tablet, light pen, digital scanner, camera)

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Distribute information**

Competency Builders:
Receive data via modem
Transmit data via electronic billboard or e-mail
Monitor electronic bulletin board or e-mail
Transmit data via modem
Transmit data via facsimile machines
Transmit data via local area networks

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Maintain filing system**

Competency Builders:
Define filing system(s)
Maintain manual filing system(s)
Maintain cross-referencing filing system
Maintain filing system for magnetic media
Maintain filing system for storing backup copies of disks
Maintain filing system for securing classified or confidential materials

BIL: Essential

EDU:	12	AD	AC
	I	R	C

Competency: **Prepare health record for storage**

Competency Builders:

Verify all forms in record for correct name and hospital number
Remove and destroy forms not preserved by the hospital
Check for proper sequence of record
Follow procedures for specific record storage method

BIL: Essential

EDU:	12	AD	AC
	I	R	C,M

Competency: **Maintain office equipment and supplies**

Competency Builders:

Perform basic office equipment maintenance
Monitor hardware and software for working condition
Assist in determining needs for software
Maintain office supplies
Update materials as mandated

Unit: Health Information Quality Control

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Perform qualitative analysis on patient's health record**

Competency Builders:

Review record for appropriate signatures and authentication for all entries
Review record for necessary dictation (e.g., discharge summary, history and physical exam, operative report)
Review record for completeness of information (e.g., inappropriate use of abbreviations)
Review record for accuracy of information
Record all omissions
Reroute incomplete records to responsible practitioners
Reanalyze record after appropriate individuals have had the opportunity to correct identified omissions

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Prepare report for physician's incomplete records**

Competency Builders:

Review physician's incomplete record file

Identify record(s) not completed within the specified time period according to medical staff by-laws, JCAHO standards, and/or applicable department of health regulations

Retrieve health records to verify delinquency

Determine if physician has received notification of incomplete record(s)

Prepare report of delinquent incomplete record(s)

Forward report to appropriate individual(s) or department(s)

Submit report to hospital administration

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Evaluate procedure for release of patient information**

Competency Builders:

Review procedure for release of patient information
Determine time period to be covered by evaluation
Retrieve records listed in correspondence log for specified time period
Review patient(s) authorization for release of information for appropriate signature and date
Identify any invalid patient authorization
Submit findings to appropriate individual(s)
Verify treatment of patient
Follow regulatory procedures for handling release of information of drug/alcohol records
Follow procedure for handing release of information of adoption records

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Evaluate procedure for health record analysis**

Competency Builders:
Review procedure for health record analysis
Determine time period to be covered by evaluation
Retrieve record(s) to be reviewed
Identify any record with omissions
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Evaluate procedures for abstracting and coding**

Competency Builders:

Review procedures for abstracting and coding
Determine time period to be covered by evaluation
Retrieve records to be reviewed
Reabstract record and check with original information for differences
Make necessary corrections
Recode record and check original codes for differences
Generate change notices, where applicable, for the business/finance office if corrections have an impact on payer reimbursement to the facility
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Evaluate procedure for transcribing medical records**

Competency Builders:

Review procedures for transcribing medical records
Determine time period to be covered by evaluation
Retrieve records to be reviewed for specified time period
Screen each report for grammar and spelling
Identify any reports with omissions or errors
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Perform quality review**

Competency Builders:

Select and/or procure topic for quality review
Select and/or procure criteria and standards for quality review
Determine time period to be included in review
Determine number of record(s) to be selected for review
Retrieve and sign out records to be reviewed
Review each record for compliance with criteria and standards
Record findings of review
Forward report to appropriate individual(s) or committee(s)
Implement new and/or revised procedures/policies subsequent to the review and analysis of the quality review findings

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Conduct utilization review process**

Competency Builders:

Determine which health record(s) are to be reviewed on a daily basis
Determine the standards and/or criteria to be used per each review to be conducted
Retrieve record(s) for review
Document findings of the review
Submit reports to appropriate authority to determine the need for continued hospitalization
Re-establish a time frame for when the next utilization review will take place if continued hospitalization is authorized
Contact director for handling of termination notice(s) if continuation of hospital stay is denied
Retain data abstracted for each review per department policies and procedures

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Prepare materials for accreditation**

Competency Builders:
Receive notice of accreditation review
Review standards and criteria for accreditation
Complete accreditation review survey form
Obtain all materials required by the accreditation review team
Correct deficiencies prior to schedule date of accreditation review visit
Notify staff of accreditation review visit

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Validate data for patient-related information system needs**

Competency Builders:
Verify data was obtained from valid sources
Verify timelines of data sources
Verify completeness of data sources
Verify accuracy of data sources
Verify appropriateness of data sources
Compare data with standards (e.g., length of stay norms, Medicare mortality rate, department productivity standards)
Check data for internal consistency
Perform edit check to monitor data accuracy
Compare data with other data sources/references to determine consistency

BIL: Essential

EDU:	12	AD	AC
		P	C

Competency: **Analyze data for patient-related information system needs**

Competency Builders:

Prepare data for analysis (e.g., compile data, develop graphs, tables)
Perform departmental case-mix analysis
Analyze data in relation to regulatory and accreditation standards
Analyze case-mix payment rates to determine reimbursement optimization (e.g., DRG)
Analyze employee performance data in relation to departmental/institutional performance standards (e.g., quality of patient care)

Unit: Health Information Report Preparation

BIL: Essential

EDU:	12	AD	AC
		P	C,M

Competency: **Prepare census reports**

Competency Builders:
Prepare daily inpatient census report
Prepare admissions statistical report
Prepare discharge statistical report
Prepare length of stay statistical report
Prepare monthly statistical report
Analyze statistical reports
Define various statistical terms (e.g., ALOS, LOS, death rates)

BIL: Essential

EDU:	12	AD	AC
		P	C,M,S

Competency: **Gather data to support patient-related information system needs**

Competency Builders:

Conduct surveys of patients, users of data, health care providers, administrator and/or researchers

Conduct interviews with users of data, health care providers, administrators, researchers and/or others

Tabulate requests for patient related data

Abstract information from patient records for research studies

Abstract information from patient records for reimbursement

Compare claims submitted to third party payers with reimbursement received

Abstract information from patient records for disease, procedures, physician, or other indices

Abstract information from patient records for compilation of registries

Abstract information from patient records for compilation of vital statistics

Abstract information from patient related records to develop user (e.g., physician profiles)

Abstract information from patient records for quality assurance studies

Abstract information from patient records for utilization, review

Abstract information from patient records for risk management

Unit: Health Information Supervision

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Design departmental services and operational systems**

Competency Builders:

Develop departmental goals and objectives
Develop departmental plans
Develop departmental policies
Revise departmental policies
Develop departmental procedures
Revise departmental procedures
Develop job descriptions
Revise job descriptions
Develop transition plans for implementation of new or revised systems
Develop goals and objectives for computerized information systems
Develop inservice education programs for departmental staff
Design forms for collection of patient related data (e.g., medical record forms, quality assurance, utilization review forms)

BIL: Essential

EDU:	12	AD	AC
	I	P	C,M

Competency: **Identify resources to support departmental operations**

Competency Builders:
Determine personnel needs
Determine equipment needs
Determine supply needs
Determine space requirement needs

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Execute plan(s) for implementing departmental services**

Competency Builders:
Select personnel
Orient personnel
Inform organization staff of plan(s)
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised information, and/or service and/or operational systems
Monitor adherence to budget (e.g., determine budget variance)
Coordinate on site review activities (e.g., PRO reviews)
Monitor changes in federal, state and local laws, regulations, and joint commission standards
Monitor policy/procedure compliance
Counsel employees
Terminate employees
Design employee staffing schedules
Maintain equipment (e.g., schedule preventive maintenance, arranged for repairs)
Coordinate educational programs for departmental and/or non departmental staff
Conduct meetings
Participate in departmental and/or institutional committees
Confer with providers and users of departmental services

BIL: Essential

EDU:	12	AD	AC
	I	P	C

Competency: **Evaluate effectiveness of departmental services**

Competency Builders:

Determine variation(s) from established objectives and/or standards of performance
Report progress toward achieving long and short range goals
Monitor accreditation survey results (e.g., JCAHO, Medicare)
Recommend improvement(s) in systems
Evaluate employee performance
Monitor departmental productivity
Monitor work flow

Unit: Medical Assisting X-ray Operator

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Identify characteristics of x-radiation**

Competency Builders:
Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Differentiate between ionizing and non-ionizing radiations
Compare different methods of measuring x-radiation
Compare different types of radiation (e.g., alpha, beta, natural, man-made)

BIL: Recommended

EDU:	12	AD	AC
		I	M,S

Competency: **Explain how x-rays are produced**

Competency Builders:

Identify the different parts of the x-ray tube
Describe the process for production of x-radiation
Differentiate among the different types of radiation produced
Describe radiographic density (e.g., contrast and detail)
Explain the Inverse Square Law and its effect on x-ray production
Apply radiographic formulas and their effect on x-ray production
Explain Ma, KvP and time and their relationship on x-ray production
Describe factors that affect radiographic density, contrast, detail, and distortion

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Describe effects of radiation on the human body**

Competency Builders:

Explain somatic and genetic effects of x-rays
Identify tissues most and least sensitive to radiation
Differentiate among exposure variables and their effects, both acute and chronic
Describe methods for reducing patient exposure
Explain methods of operator protection
Identify common methods of personnel monitoring
Describe LD 50/30 (e.g., Lethal Dose)
Explain Dose Equivalent Limit

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Practice radiation safety procedures in accordance with OSHA and EPA**

Competency Builders:
Adhere to safe radiation practices
Demonstrate radiation safety precautions for patients
Demonstrate radiation safety precautions for operators
Comply with equipment safety laws
Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities, injection of an iodinated contrast medium)
Wear radiation monitoring device(s) while on duty
Document personal radiation exposure
Question female patients about possible pregnancy and alert physician
Remove all unnecessary persons from area prior to taking radiograph
Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)
Place protective shield(s) over patient's radio-sensitive organs prior to exposure
Minimize personal and patient radiation exposure through principles of time, distance, and shielding
Demonstrate appropriate infection control technique(s) when radiographing a patient in isolation
Report radiologic accidents and/or spills immediately to proper authorities
Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure; contrast media reactions; respiratory/cardiac distress)
Practice universal precautions

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Demonstrate knowledge of equipment**

Competency Builders:

Demonstrate the function of a diagnostic x-ray unit
Demonstrate the function of a fluoroscopic unit
Demonstrate the function of a portable x-ray unit
Demonstrate the function of a portable c-arm unit

BIL: Recommended

EDU:	12	AD	AC
		I	S

Competency: **Demonstrate general knowledge of diagnostic radiology procedures**

Competency Builders:

Describe common radiological procedures
Describe common fluoroscopic procedures
Describe computer tomography as an imaging modality
Describe common mammography procedures
Describe common computerized tomography procedures
Describe common magnetic resonance procedures
Describe common sonography procedures
Describe common special procedures
Describe common nuclear medicine procedures
Describe common quality assurance procedures
Describe common radiation therapy procedures
Differentiate between diagnostic and therapeutic radiology
Describe common surgical procedures, to include c-arm equipment
Describe common contrast exams

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Ready equipment and materials for radiographic procedures**

Competency Builders:

Differentiate among catheters, dilators, guidewires, and needles by size, type, and/or function
Warm up x-ray tube to achieve proper operating conditions
Measure appropriate patient parts for requested examination
Identify appropriate exposure factors
Modify exposure factors for circumstances (e.g., body hibitus, voluntary and involuntary motion, pathological conditions)
Restrict beam exposure to area of interest
Set appropriate exposure factors to achieve optimum image quality
Perform radiographic examination in a sequence which avoids or minimizes undesirable effects
Check radiographs to verify they contain proper identification and are of diagnostic quality
Identify corrective measure if radiograph is not of diagnostic quality
Clean patient and/or equipment to remove anything that might interfere with radiograph quality
Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested
Utilize sterile technique
Respond to malfunctioning medical equipment
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Differentiate among contrast media
Prepare contrast media accurately when appropriate
Obtain immobilization devices when necessary
Obtain adequate cassettes and accessories

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Perform radiographic equipment check procedures**

Competency Builders:

Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Demonstrate knowledge of quality control and quality assurance procedures
Collect data for ongoing quality assurance monitoring

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Provide accurate radiographic record identification and retrieval**

Competency Builders:
Record required information following performance examination
Retrieve radiographic patient records (e.g., radiographs or reports)
Identify patient using information on request form
Confirm patient's identity by checking wristband and/or by questioning patient
Imprint proper patient identification and markers onto film
Verify correctness of patient identification and markers on film
Combine radiographic requisition with radiographs for interpretation and filing
Check radiographic requisition to verify accuracy of information

BIL: Recommended

EDU:	12	AD	AC
		I	

Competency: **Ready patient for radiographic procedures**

Competency Builders:

Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)

Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure, contrast media reactions; respiratory/cardiac stress)

Assist patient in moving, transferring and ambulating

Explain procedure to patient to relieve anxiety and gain patient's cooperation during procedures

Give patient appropriate breathing instructions prior to making exposure

Assist physician in observing vital signs

Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)

Assist physician with radiographic procedure if requested

Monitor medical equipment attached to patient while in radiology department (e.g., IVs, oxygen)

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Perform radiographic procedures**

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Apply universal precautions
Adjust radiographic factors on x-ray equipment
Employ infection control procedures
Align patient, radiographic/fluoroscopic unit, and image receptor to product images of requested anatomical structures/systems
Use immobilization devices as needed
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Initiate rotor prior to making exposure
Give patient appropriate breathing instructions prior to making exposure
Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning
Identify corrective measure if radiograph is not of diagnostic quality

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Expose radiographic film**

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Adjust radiographic factors on x-ray equipment
Apply infection control procedures
Position patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems
Use immobilization devices as needed

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Process exposed radiographic film**

Competency Builders:

Follow manufacturer's instructions for x-ray processors and solutions
Mix solutions for developing and fixing radiographic film
Follow darkroom procedures
Unload cassettes
Handle film properly
Read thermometer
Interpret time and temperature chart
Load film into processor
Follow safety precautions to prevent eye injury and minor burns
Dispose of mixed solutions in accordance with EPA regulations
Reload cassettes
Clean equipment
Monitor performance of automatic processor using sensitometry
Report malfunctions in automatic processor

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Store radiographs and unexposed film**

Competency Builders:
Handle film(s) properly
Hang radiographs on viewboxes in proper orientation
File radiographs
Check expiration date
Store exposed and unexposed film properly

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Maintain supply inventory**

Competency Builders:
Identify supplies to be kept in stock
Identify appropriate stock levels
Organize supplies
Re-order supplies
Maintain a clean working environment

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Demonstrate principles of proper body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics

Identify common causes of back injuries

Demonstrate proper body mechanics used in lifting, moving, transferring, ambulating, and positioning patient

Assist patients with adaptive devices and/or attached medical equipment during movement

Unit: Medical Assisting Respiratory Care

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Identify respiratory care uses**

Competency Builders:

List areas in which respiratory therapy is involved with patient services
Describe the rationale for lung expansion therapy
List categories of diagnostic and patient monitoring procedures
List procedures provided by respiratory therapy
List conditions/diseases of patients who receive respiratory therapy treatment
List indications for oxygen therapy
List indications for aerosol and humidity administration
List indications for the use of chest percussion/chest physiotherapy
List indications for naso-tracheal, endotracheal, tracheal suctioning
List goals of pulmonary rehabilitation and patient education
Differentiate between educational programs of various respiratory care practitioners

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Prepare non-life support respiratory therapy equipment for patient use**

Competency Builders:
Explain purpose and application of non-life support equipment
Identify components and ancillary equipment of non-life support equipment
Identify oxygen administration devices
Identify aerosol generators, croup tents, and vaporizer
Identify humidifiers
Identify gas delivery, metering, and analyzing devices
Identify vacuum system components
Identify patient breathing circuits
Identify manometers and gauges
Verify proper assembly of non-life support equipment
Disassemble non-life support equipment

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Perform rehabilitation**

Competency Builders:

Instruct pursed lip breathing
Instruct diaphragmatic breathing
Instruct cough control
Instruct diet
Instruct exercise conditioning
Instruct activities of daily living
Instruct bronchial hygiene techniques (e.g., Aerochamber, Inhalers)
Instruct smoking cessation

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Manage pharmacological agents**

Competency Builders:
Administer and evaluate steroids
Administer and evaluate bronchodilators
Administer and evaluate antiviral
Administer and evaluate mucolytics
Administer and evaluate antibiotics
Administer and evaluate bronchoconstrictors
Administer and evaluate nicotene therapy
Administer and evaluate artificial surfactant
Administer and evaluate antipneumocystis
Administer and evaluate topical anesthetics
Administer and evaluate expectorants
Administer and evaluate vasoconstrictors
Administer and evaluate mast cell stabilizer

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Perform assessment**

Competency Builders:

Assess level of consciousness
Evaluate level of activity
Assess WOB (e.g., work of breathing)
Evaluate cough
Obtain smoking history
Assess occupational exposure
Obtain family history
Measure chest excursion
Assess level of dyspnea
Assess color
Assess clubbing of fingers
Assess use of accessory muscles
Assess position (e.g., tripoding)
Assess breathing patterns (e.g., Cheynes Stokes)
Assess breath sounds (e.g., wheeze, rhonchi, rales)
Interpret lab values
Evaluate chest radiograph
Obtain and evaluate sputum cultures
Obtain and evaluate EKG

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Prepare diagnostic equipment for patient use**

Competency Builders:
Explain purpose and application of diagnostic equipment
Identify diagnostic equipment
Identify the components and ancillary equipment of diagnostic equipment
Assemble portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume for patient use
Disassemble portable spirometers, and electronic devices used to record flow, compliance, resistance, rate, and volume for cleaning
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function
Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG
Identify parts of Swan Ganz catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters
Demonstrate ABGs/co-oximetry equipment
Demonstrate pulse oximetry equipment
Demonstrate transcutaneous O2 and CO2 equipment
Demonstrate end tidal CO2 equipment

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders**

Competency Builders:

List indications for O2 therapy

Identify and utilize O2 administration devices

Identify and utilize gas delivery and analyzing device, metering

Identify and utilize the potential dangers, safety measures and procedures associated with the use, transportation and storage of medical gases

List methods by which medical gas cylinders are identified

Differentiate Pin Index Safety System, Diameter Index Safety System and Compressed Gas Association (CGA) Safety System

Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration

Identify tools necessary to remove the regulator from a compressed gas cylinder

List possible hazards involved in changing the regulator on a compressed gas cylinder

Explain procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders

Verify proper operation of flowmeters, regulators, gauges, and compressed gas cylinders

Define bulk gas system

Define and identify the components of a manifold system

Define and identify the components of a piping delivery system

Identify items to be monitored in a bulk manifold compressed gas system

Explain LOX systems safety and hazards

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Disinfect or sterilize respiratory therapy equipment**

Competency Builders:

Define particulates, bacteria, viruses, fungi, rickettsiae, and spores
Describe infectious hazards regarding respiratory therapy equipment
Differentiate between disposable and reusable equipment
Package components and ancillary equipment for sterilization
Identify methods for sterilizing and disinfecting reusable equipment
Outline proper cleaning, disinfecting, and sterilizing methods
Demonstrate safe practice in cold liquid disinfection and sterilization
Demonstrate safe practice in gas sterilization
Explain how spore strip is used in guarantee sterilization of equipment
Explain why proper dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients
Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Test respiratory therapy equipment for proper operation and patient readiness**

Competency Builders:

Verify that equipment components are assembled properly with all necessary accessories
Check safety check of all components
Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging
Verify all equipment functions as required
Document faulty or defective equipment
Troubleshoot equipment for proper function
Change equipment as needed
Follow manufacturer's instructions for safe operation of the equipment

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Perform pulmonary function tests**

Competency Builders:
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Prepare or demonstrate special procedures**

Competency Builders:
Assist with bronchoscopy
Assist with thoracentesis
Perform pulmonary and cardiac stress testing
Assist cardioversion
Perform defibrillation
Assist transtracheal aspiration
Manage transtracheal catheters
Perform sleep apnea studies
Manage apnea monitors
Manage chest tubes
Manage chest drainage systems

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Demonstrate therapeutic modalities**

Competency Builders:
Demonstrate small volume aerosol and list indications
Demonstrate large volume aerosol and list indications
Demonstrate ultrasonic nebulizer and list indications
Demonstrate chest percussion and list indications
Demonstrate lung expansion and list indications
Demonstrate noninvasive ventilation and list indications
Demonstrate dose inhalers and spacers and list indications

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Demonstrate proper procedure for dispensing respiratory therapy medications**

Competency Builders:
Identify patient
Verify accuracy and completeness of medication order
Explain purpose of respiratory medications to patient
Explain indications, actions, contraindications, side effects and hazards of respiratory medications
Demonstrate proper assembly of aerosol delivery device
Calculate dosages of respiratory therapy medications
Document patient/client response to medication

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Demonstrate proper procedure for hyperinflation**

Competency Builders:
Identify patient
Determine if patient is a candidate for hyperinflation therapy according to clinical practice guidelines
Determine proper hyperinflation technique for the patient
Identify contraindications and hazards of hyperinflation therapy
Demonstrate proper hyperinflation techniques (IPPB and SMI)
Monitor patient and document therapy given appropriately

Unit: Medical Assisting Physical Therapy

BIL: Essential

EDU:	12	AD	AC
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Competency: **Define patient needs**

Competency Builders:

Obtain data through patient/responsible party interview
Gather information from medical record
Observe patient
Identify activities of daily living, work, and leisure
Identify architectural barriers to patient mobility
Identify contraindications for treatment
Adjust treatment activities in accordance with patient tolerance
Demonstrate proper methods of positioning and draping patient
Provide for patient privacy
Consult with physical therapist
Observe, document, and report patient progress

BIL: Recommended

EDU:	12	AD	AC
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Competency: **Develop therapeutic interventions**

Competency Builders:
Gather data from assessments
Prioritize patient problems
Identify realistic goals
Identify length of time to achieve goals
Identify therapeutic procedures that have potential for achieving goals
Identify the influence of biological, psychological, cognitive, social, and cultural factors on compliance and achievement of goals
Contribute to the development of the treatment plan
Explain plan of treatment and goals to patient responsible party
Consult with physical therapist (e.g., treatment termination)
Review prescribed orders
Refer to other community resources as needed
Participate in discharge planning
Identify medications and potential side effects

BIL: Essential

EDU:	12	AD	AC
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Competency: **Perform therapeutic measures**

Competency Builders:

Collaborate with the physical therapist
Prepare treatment area
Prepare equipment and modalities
Prepare patient for treatment
Explain indications, contraindications and possible side effects of treatment
Assist patient with relaxation exercises
Assist patient with strengthening exercises
Assist patient with range of motion exercises
Assist patient with endurance exercises
Assist patient with balance exercises
Assist patient with gross motor coordination
Assist patient with gait training
Assist patient with neurological techniques (e.g., NOT, PNF)
Perform manual therapy techniques
Instruct patient in functional activities (e.g., mobility, transfers)
Assist patient with work-hardening activities
Assist with paraffin treatment
Assist with hydrotherapy
Assist with fluidotherapy
Assist with diathermy
Assist with contrast bath
Apply hot packs
Apply cold therapy (e.g., cryotherapy)
Perform ultrasound techniques
Apply therapeutic electrical stimulation (e.g., TENS, MENS, NMES)
Apply ultraviolet treatment
Apply mechanical traction
Apply intermittent venous compression
Assist with prosthetic training
Assist with use of orthotics

Measure for custom pressure gradient garments
Assist with use of pressure garments
Apply bandages
Apply dressings
Perform wound debridement
Perform therapeutic massage
Perform tilt table treatment
Assist in set-up and removal of electromylogram (EMG) biofeedback equipment
Monitor patient use of therapeutic equipment
Instruct patient in use of body mechanics
Monitor medical equipment attached to patient during treatment (e.g., oxygen, IVs, catheters, drainage tubes)